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COMMERCE

BETWEEN THE

UNITED STATES AND MEXICO.

A REPORT IN REPLY TO A RESOLUTION OF THE HOUSE OF REPRESENTATIVES OF JANUARY 31, 1884,

BY

JOSEPH NIMMO, JR.,
CHIEF OF BUREAU OF STATISTICS,
TREASURY DEPARTMENT.

WASHINGTON:
GOVERNMENT PRINTING OFFICE.
1884.

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TRADE BETWEEN MEXICO AND THE UNITED STATES.

LETTER

FROM

THE SECRETARY OF THE TREASURY,

TRANSMITTING,

In reply to the resolution of the House of Representatives passed January 31, 1884, *information in regard to the trade between the United States and Mexico, and to the traffic over the railroads connecting the two countries.*

FEBRUARY 8, 1884.—Referred to the Committee on Commerce and ordered to be printed.

TREASURY DEPARTMENT,
OFFICE OF THE SECRETARY,
Washington, D. C., February 7, 1884.

SIR: I have the honor to transmit, herewith, to the House of Representatives, a report prepared under my direction by the chief of the Bureau of Statistics of this Department, in reply to a resolution of the House of Representatives, of January 31, 1884, requesting the Secretary of the Treasury to submit to that House such information as he may be able to communicate, at an early day, in regard to the trade between the United States and Mexico, and to the traffic over railroads connecting the two countries.

Very respectfully,

CHAS. J. FOLGER,
Secretary.

Hon. JOHN G. CARLISLE,
Speaker of the House of Representatives.

TREASURY DEPARTMENT,
BUREAU OF STATISTICS,
Washington, D. C., February 6, 1884.

SIR: The following resolution of the House of Representatives, agreed to January 31, 1884, has been referred to me for reply:

> *Resolved,* That the Secretary of the Treasury be requested to transmit to this House such information as he may be able to communicate, at an early day, in regard to the trade between the United States and Mexico, and to the traffic over railroads connecting the two countries.

In compliance with your direction, I have the honor to submit to you the following answer to this resolution.

The subject of the trade and transportation interests of Mexico has, during the last eight months, commanded my attention in the prepration of my annual report on the internal commerce of the United States, which report relates to the commercial, industrial, and transportation interests of the Pacific coast, and to transcontinental railroads, embracing also the consideration of the relations of the trade and transportation interests of the two adjacent countries, viz, the Dominion of Canada, and Mexico, to the commercial and industrial interests of the United States. I have made use of the results of this work, in so far as it relates to Mexico, in the preparation of my reply to the resolution of the House of Representatives.

I am, sir, very respectfully, yours,

JOSEPH NIMMO, JR.,
Chief of Bureau.

Hon. CHAS. J. FOLGER,
Secretary of the Treasury.

COMMERCE
BETWEEN THE
UNITED STATES AND MEXICO,
AND THE
CONSTRUCTION OF RAILROADS
CONNECTING THE TWO COUNTRIES.

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COMMERCE BETWEEN THE UNITED STATES AND MEXICO.

INTRODUCTORY REMARKS.

The United States and Mexico, although territorially contiguous, have heretofore been in a commercial sense widely separated, from the fact that an intervening belt of more than one thousand miles in width, without transportation facilities has separated the centers of commerce and industry of the two countries. But within the last three years enterprises have been inaugurated and pushed forward, whereby the United States and Mexico will soon be placed in close communication by means of that most forceful agency of modern enterprise, the railroad. The advent of this important change in the commercial relations of the two countries is at hand. In a few weeks the first of the trunk lines designed to connect the two countries will be opened for traffic, and it is probable that within two years from the present time, three or four other lines with their branches will have been so far advanced toward completion as to place all the more important towns and cities of Mexico in immediate communication with the commercial centers of the United States. Soon the awakening influence of the new and grand possibilities thus opened for commercial intercourse will be felt in both countries.

This recent development in the commercial history of the two contiguous countries has been largely due to the broad and liberal policy of internal improvements, which has been adopted and steadily adhered to during the last ten years by the Government of Mexico, viz, the granting to railroad corporations of this country valuable franchises and liberal subsidies in aid of railroad construction in that country. These acts bespeak the present attitude and disposition of the people of Mexico toward the people of the United States. From one end of that country to the other the expectation as to the prosperity which will follow the completion of the railroads now in progress is the absorbing thought of the hour. The new life into which Mexico is now entering has already visibly manifested itself in the growth of commerce, in an increase of her revenues, in the appreciation of the value of property along the lines of the railroads in progress, and in an increase of wages, the surest sign of awakened enterprise. The new-born hopes and aspirations of the Mexicans, and their manifest desire and efforts for the cultivation of more intimate commercial relations with the United States, highly commend them to the generous co-operation of the people of this country.

It is a subject for rejoicing at the present time that the cause of political disturbance in Mexico during the last sixty years has been removed, and that the principles of civil and religious liberty have been established in that country. The rights of person and property are also recognized and protected, and the way appears to be fully prepared for the safe prosecution of commercial enterprise. In view of these facts, it is believed that the present time constitutes the most important epoch in the history of Mexico since she yielded to the sway of the Spanish conqueror in 1521.

The international railroad lines now in course of construction in Mexico are almost exclusively controlled by citizens of the United States, and will be operated in connection with railroads in this country. One of these lines, the Sonora Railway, is already completed to the port of Guaymas on the Gulf of California, and, with the Southern Pacific Railroad and the Atchison, Topeka and Santa Fé Railroad, form a trans continental line between points in the United States and the Pacific coast. Another line, the Mexican Central, which extends from El Paso, in Texas, to the city of Mexico, is expected to be completed by the 1st of April, 1884. Three other trunk lines which cross the Rio Grande are now in progress.

The commerce of the United States with Mexico, like that with Canada is from the fact of territorial contiguity intimately connected with the internal commerce of the United States. As the principal railroads of Canada constitute an integral part of the railroad system of this, country, so will the railroads now in course of construction in Mexico become intimately connected with our great trunk railroad lines, and bring that country into new and important commercial relations with the United States. The two countries have a common border line of about 1,400 miles in length, extending from the Gulf of Mexico to the Pacific Ocean. Along this line there has been completed during the past year one of the most important trunk railroads in the United States, viz, the line formed by the Southern Pacific and the Galveston, Harrisburg and San Antonio Railroad, extending from San Francisco to New Orleans.

Across the territory of Mexico the Pacific Ocean may be reached by railroads on shorter lines than by any possible line within the borders of the United States. The territorial magnitude of Mexico may be more readily appreciated by comparisons with certain States and sections of this country. The area of Mexico is 741,791 square miles, being a little in excess of the area of that portion of the United States which is situated east of the Mississippi River, exclusive of the States of Wisconsin, Indiana, and Mississippi. The border States of Mexico are Sonora, Chihuahua, Coahuila, and Tamaulipas. Sonora is larger than the States of Ohio and Indiana combined; Chihuahua is nearly as large as New York and Pennsylvania combined; Coahuila is larger than New York, and Tamaulipas is nearly as large as Maryland, Delaware, New Jersey, Connecticut, and Massachusetts combined.

On account of its configuration and its geographical position, Mexico has been likened unto a cornucopia, with its mouth turned towards the United States.

Beside the fact of territorial contiguity, the topographical features of Mexico are in a high degree favorable to the development of commerce with this country over railroad lines. Mexico may be described in general terms as a series of table lands of various elevations from the sea-level to altitudes of from 7,000 to 8,000 feet. These plateaus, which are broken by mountain ranges, present almost every variety of climatic conditions.

The orological features of the country are also favorable to commerce with this country, as the mountain ranges extend in a north and south direction, affording pathways for construction of railroads of favorable gradients. About the beginning of this century Humboldt pointed out as the most practical route for commercial intercourse between Mexico and the United States the high plateau extending from the city of Mexico to the northern border of that country, and through the United States to British America. From these high plateaus there is a gradual descent toward the Rio Grande at the east. This topographical feature of the country is also favorable to international commerce by rail.

Along the Gulf and Pacific coasts of Mexico there is a strip of low lands known to the Mexicans as *tierra caliente*, the climate of which is hot and unhealthy. It bids defiance to strangers. The ascent from the lower level to the elevated plateaus is abrupt and marked by cooler temperatures. The hot and unhealthy seaboard, and the lofty and step gradients involved in the approach to the high lands of the interrior, constitute somewhat serious obstacles to maritime commerce, while the high table lands, extending to and through the United States, by their cooler temperature and healthy climate, invite to commercial intercommunication on interior lines with this country.

The physical characteristics of Mexico have determined the distribution of her population, and consequently the location of her industrial and commercial enterprises. About nine-tenths of the people of that country dwell upon the high lands, and only about one-tenth along the Gulf and Pacific coast. Vera Cruz, the largest city on the Gulf of Mexico, has a population of only about 9,000, and Mazatlan, the largest city on the Pacific coast, has a population of only about 10,000; whereas all the larger cities are situated on the high table lands.

The population of the principal cities of the interior are, as nearly as can be ascertained, as follows:

Mexico, 300,000; Leon, 120,000; Puebla, 100,000; Guadalajara, 70,000; Guanajuato, 55,000; San Luis Potosi, 45,000, and Merida, 45,000.

After three hundred years of colonial dependency and a long and bloody internecine struggle, Mexico has recently proved her capacity for progress by the establishment of a Government based upon the principle of civil and religious liberty, and by the adoption of a national policy in regard to the facilities of railroad transportation, which will place her in intimate commercial intercommunication with the United States.

In order to arrive at even an approximate estimate as to the probable commercial capabilities of Mexico, and more particularly as to the prospects of developing a large and important commerce between that country and the United States, it is deemed proper to speak with some degree of particularity of the climatic conditions of the country, its agricultural and mineral resources, and in regard to some of the characteristics of the people upon which must depend very largely the question as to the possibility of establishing important commercial relations between them and the people of the United States. The question as to the guarantees which Mexico is able to offer for the security of life and property, and the protection of strangers in the exercise of their natural rights, and especially the disposition of the people of that country toward the people of the United States, are also matters which have an important bearing upon the cultivation of commercial relations between the two countries. All these subjects are, in their order, hereinafter considered somewhat at length.

POPULATION AND ITS DISTRIBUTION.

The population of Mexico is estimated to be at the present time about ten millions. It may be classified approximately as follows:

Persons of pure Spanish lineage	1,000,000
Persons of aboriginal descent (commonly known as Indians)	5,500,000
Persons of mixed blood	3,500,000
Total	10,000,000

The Spanish element in Mexico sprung from the nation under whose flag and by the patronage of whose king America was discovered. Her bold navigators and explorers under Cortez and De Leon and De Soto and Pizarro and other famous leaders planted the flag of Spain upon the fairest portions of the western world. During the fifteenth and sixteenth centuries no other people of Europe exhibited greater courage or persistency in maritime adventure and colonization. Some of their conquests were marked by the ferocity of the age in which they lived. Such was the character of the conquest of Mexico. But the Spanish conquerors subdued the land to the arts of their own civilization. Only twenty-eight years after Cortez entered the city of Mexico Spanish adventurers had pushed their explorations north 1,500 miles, and in the year 1550 they founded the city of Santa Fé. The advance line of American enterprise reached this ancient city only about five years ago, though in the year 1883 it celebrated its three hundred and thirty-third anniversary. The founding of Santa Fé antedates the settlement at Jamestown fifty-six years, and the landing of the pilgrims seventy-one years.

Generally it may be said that persons of Spanish descent and those of mixed blood more nearly approaching the Spanish race constitute chiefly the more advanced portion of the population of Mexico in point of intelligence, enterprise, and social status. In this class are embraced chiefly the landed proprietors of the country, men of professional pursuits, merchants, bankers, and artificers; also persons who participate actively in the political affairs of the country, and commissioned officers of the army. But it is to the Indian population that attention will here be particularly invited.

A wide difference exists between the Indians of the United States and British North America and the so-called Indians of Mexico. They are of different races. The Mexican Indians are docile and industrious. They engage in agriculture, in mining, and in such rude arts as are practiced in countries which do not enjoy the advantage of the modern facilities of transportation for carrying on either internal commerce or trade with other countries. In all the wars in which Mexico has been engaged the Indians of the country have constituted largely the rank and file of her armies. They are now enfranchised citizens, and under the laws of their country, and to the extent to which they are taxed, they enjoy equal political rights with those of Spanish race.

The Indians of Mexico and the inhabitants of mixed blood, especially these more nearly approaching the Indian type, constitute mainly the laboring classes of the country. But from the ranks of the aborigines have sprung men of mark, who have risen to distinction in science, in the arts, in letters, in educational employment, in the church, in military life, and in the conduct of the affairs of state. Benito Juarez, the deliverer of his country from the rule of the Austrian usurper, and afterwards President of the Republic, was an Indian of the full blood. As a statesman and military leader he stood peerless among his countrymen. Morelos, a patriot soldier, who achieved fame as a military and political leader in the early efforts of his countrymen to throw off the Spanish yoke, was also an Indian of the full blood. In physical strength and endurance the Mexican Indians are said to be the superiors of the mixed races and of those of full Spanish descent.

The constructors of the railroads which extend from the United States into Mexico have found the Indians to be efficient laborers in the work of grading, and that upon the lines in operation they have been found to be trustworthy as flagmen and switchmen, and in other positions requiring patience, vigilance, and constant attention to duty. Upon their capacity as producers the future prosperity of Mexico largely depends. With the aid of modern implements and machinery, which can readily be supplied to them upon the completion of the railroads now in course of construction, their efficiency as producers and as contributors to a large and growing international commerce will be greatly increased.

The following table, showing the population of the several States of Mexico, has been compiled from the most recent data found among the archives of the secretary of state of that country for the year 1878, and is taken from "Trabajos Preliminares, par la organizacion de la Estadistica General de la Republica Mexicana," Dr. Antonio Penafiel, Mexico, 1883:

States.	Population.	States.	Population.
Aguascalientes	140, 430	Puebla	783, 466
Campeche	89, 481	Queretaro	203, 370
Coahuila	121, 895	San Luis Potosi	516, 486
Colima	65, 827	Sinaloa	169, 231
Chiapas	203, 494	Sonora	110, 837
Chihuahua	191, 200	Tabasco	104, 747
Durango	190, 846	Tamaulipas	140, 137
Guanajuato	729, 988	Tlaxcala	133, 498
Guerrero	301, 243	Vera Cruz	538, 628
Hidalgo	427, 350	Yucatan	302, 315
Jalisco	984, 213	Zacatecas	422, 502
Mexico	696, 068	Federal District	351, 804
Michoacan	661, 534	Territory of Lower California	28, 746
Morelos	159, 160		
Nuevo-Leon	189, 722	Total*	9, 686, 777
Oaxaca	728, 559		

From this table it will readily be seen, by reference to a map of Mexico, that the bulk of the population is found in the southern part of the country. About 82 per cent. of the total population reside south of the parallel of Tampico, and more than half the wealth of the country is found south of the northern boundary of the Federal District, in which the city of Mexico is situated.

CLIMATE.

The conformation and the geographical situation of Mexico, between two great bodies of water, give it the characteristics of an oceanic rather than of a continental climate. The country extends through 17 degrees of latitude, of which about 8½ degrees are in the torrid zone and about 8½ degrees in the north temperate zone.

The orological features of the country also exert a marked influence both upon the rainfall and upon the temperature of the various localities.

The climate of the different States and sections is likewise greatly influenced by altitude. As the resultant of all these natural conditions there is found in Mexico almost every variety of climate, with its corresponding vegetable productions. Generally it may be said of the more elevated portion of the country, where nine-tenths of the inhabitants reside, that it has a climate unsurpassed in salubrity by that of any other country on the globe.

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*It is stated by Señor Romero, minister plenipotentiary of Mexico to the United States, that the ascertained population of Mexico is less than the actual population. The difficulties and great expense of taking the census in many parts of the country, especially in mountainous regions, and in the states which have a large Indian population, and the apprehensions of large numbers as to the real intent of the census-takers, render it at the present time impracticable to ascertain the exact population. Señor Romero is of the opinion that the total population of the country is not far from 12,000,000.

The latitude of the city of Mexico is 19° 26′ north. Its altitude, 7,350 feet above the level of the sea, gives it, however, the mean annual temperature of Naples, in latitude 40° 52′ north, and a mean summer temperature similar to that of southern Germany, the latitude of which is about 50° north. The mean annual temperature of the city of Mexico is found in the valley of the Mississippi River at about the latitude of 35° north. This is a little south of Memphis, Tenn., and constitutes the northern boundary line of the States of Mississippi, Alabama, and Georgia. In other words, the elevation of the city of Mexico of 7,350 feet above the level of the sea gives it the mean annual temperature of points in the United States 15° 5′, or 1,036 statute miles farther north. Attention is invited to Appendix No. 5, an interesting and valuable statement by the Chief Signal Officer of the United States Army, in regard to the effects of altitude upon the climate of Mexico.

The following table, showing the mean annual precipitation at various points in the United States and in Mexico, has also been furnished to this office by the Chief Signal Officer of the Army:

Statement showing the mean annual precipitation, in inches, at the below-named places.

[Compiled from the records on file at the office of the Chief Signal Officer of the Army.]

Station.	No. of years.	Annual precipitation.	Station.	No. of years.	Annual precipitation.
		Inches.			*Inches.*
Atlanta, Ga	4	58.25	Guanajuato, Mexico	1	42.28
Chicago, Ill	11	36.81	Leon, Mexico	2	26.50
Cincinnati, Ohio	11	44.61	Mazatlan, Mexico	1	57.28
New York, N. Y	12	43.00	Mexico, Mexico	2	26.27
Pittsburgh, Pa	11	36.49	Morelia, Mexico	1	25.66
Saint Louis, Mo	12	37.46	Pabellon, Mexico	2	20.46
Saint Paul, Minn	11	30.11	Puebla, Mexico	2	44.62
San Francisco, Cal	11	23.46	Zacatecas, Mexico	1	13.50
Washington, D. C	12	42.63			

The rainy season in the southeastern part of Mexico lasts about six months, and in the northern part of the county only about two months.

The agricultural pursuits of Mexico are generally conformed to the conditions of a wet and a dry season. A rainfall during the dry season in most cases does harm rather than good.

The following statement shows the elevations of certain points in the United States situated upon the same general series of high table lands which extend north from Mexico through the United States and into British America, also the altitudes of certain points in South America and in Mexico:

	Feet.
Cheyenne, Wyo	6,080
Denver, Colo	5,197
Salt Lake City	4,261
North Platte, Colo	4,713
South Pueblo, Colo	4,676
Granger, Wyo	6,278
Quito, Peru, South America	10,000
La Paz, Bolivia, South America	12,200
Laredo, Mexico	400
Piedras Negras, Mexico	720
Chihuahua, Mexico	4,072
Aguascalientes, Mexico	6,261
Zacatecas, Mexico	8,040

	Feet.
Queretaro, Mexico	6,363
San Luis Potosi, Mexico	5,905
City of Mexico, Mexico	7,349
Puebla, Mexico	7,053
Oaxaca, Mexico	5,072
Toluca, Mexico	1,021
Morelia, Mexico	6,484
Durango, Mexico	6,893
Guanajuato	6,789
Fresnillo	7,145

The hypsometric map accompanying this report exhibits approximately the relation to altitudes of the railroads now in course of construction in Mexico, and which are designed to connect the United States with that country. This map, compiled from a hypsometric map of Mexico, prepared by E. G. Ravenstein and published in J. L. Geiger's work on Mexico, shows the contour lines of table lands, the elevations of which are from 1,000 to 6,000 feet. It also indicates the great advantages afforded by the topographical features of Mexico and consequently its more general climatic characteristics for commerce with the United States by rail. Along the coast is shown in yellow color the hot, unhealthy belt—*terra caliente*—where, as before stated, dwell only about one-tenth of the entire population; higher up are the elevations from 1,000 to 3,000 feet, indicated by the red color; still higher are the elevations from 3,000 to 6,000 feet, indicated by the brown color; while higher yet are the elevations above 6,000 feet, indicated by the blue color. The table lands are much broken by mountain ranges, spurs, and isolated peaks. The valleys, extending from the coast into the interior and between the mountain ranges of the high lands are in most cases as hot as the low lands on the coast, and have a tropical vegetation, while the plateaus are cool, and their agricultural products are those of the temperate zone. On the high lands are situated the most populous cities, viz, Mexico, Puebla, Queretaro, Guanajuato, Leon, San Luis Potosi, Zacatecas, and Durango.

It is seen from the map that the line of the Mexican Central Railroad is located entirely upon the high plateaus. The Mexican International Railroad crossing the Rio Grande at Piedras Negras, and the Mexican National Railroad crossing the same river at Laredo, pass by direct routes to the higher altitudes, while the Mexican Southern Railroad, crossing the Rio Grande at Laredo, skirts the eastern slope of the Sierra Madre Range for about 500 miles, and then makes the ascent to the high table lands south of the city of Mexico. Throughout Mexico there is exhibited oftentimes within the distance of 40 miles almost every climatic condition, from the torrid to the middle of the temperate zone, with all the variety of vegetable products which is the natural result of such climatic differences. This variety of products of the soil found in Mexico within narrow limits will undoubtedly be promotive of a prosperous local traffic on all the well-located railroads of the country.

Attention is invited to a statement made by Mr. A. K. Owen, chief engineer of the American and Mexican Pacific Railway, in regard to the variety of climatic conditions and of the vegetable productions of the belt of country across Mexico, from the State of Sinaloa on the Pacific to the State of Coahuila on the Rio Grande. (See Appendix No. 4.)

AGRICULTURE.

The soil of Mexico is generally of great fertility. The character of the products of different localities depends largely upon climatic conditions, which, as already shown, have a wide range, being the resultant of latitude, elevation, and situation with respect to mountain ranges. Thus there is found in Mexico a greater variety of products of the soil than isto be found in almost any other country.

The low lands along the Gulf of Mexico and on the Pacific Ocean are generally well supplied with moisture by heavy dews and rainfalls, as are also the high lands south of Queretaro, but north of that point artificial irrigation is required upon the plateaus in most localities in order to produce the best results. The percentage of arable land in Mexico is perhaps as large as it is in the United States.

The more important agricultural products of Mexico are Indian corn, wheat, sugar-cane, beans, cotton, oats, red pepper, coffee, and tobacco. The country also produces a great variety of other vegetables and of fruits, which products contribute largely to the sustenance of the people, and will, undoubtedly, supply a large amount of local traffic to the railroads now projected and in course of construction, but are not likely to become important articles of foreign commerce, even in the trade of Mexico with the United States.

It is stated that nearly seven-eighths of the population of Mexico, embracing, chiefly, the laboring classes, subsist almost entirely upon Indian corn and beans.

The following table, compiled from a statistical chart by Bodo von Glaimer in the year 1883, gives, in the order of magnitude, the value of twenty-one of the principal agricultural products of Mexico, amounting in the aggregate to $174,349,174:

Agricultural products of Mexico from the latest available data, from statistical chart by Bodo von Glaimer, published in the year 1883.

Articles.	Values.	Articles.	Values.
Indian corn	$114, 185, 990	Potatoes	$584, 280
Wheat	17, 525, 890	Spanish pea	543, 283
Sugar-cane	8, 735, 000	Lima beans	478, 510
Beans	8, 405, 070	Chick pea	470, 940
Cotton	6, 605, 831	Indigo	288, 000
Oats	4, 403, 770	Blue seed	215, 000
Red pepper	4, 200, 000	Sarsaparilla	189, 460
Coffee	2, 074, 200	Anise seed	105, 200
Tobacco	2, 006, 130	Lentils	83, 920
Rice	1, 246, 000		
Cocoa	1, 140, 150	Total	174, 349, 174
Vanilla	862, 550		

Mexico also produces India rubber, cochineal, and many other tropical products not mentioned in the above table.

The value of henequin—a kind of hemp—produced in the States of Yucatan and Campeche is stated at $2,125,000.

The methods pursued in tilling the soil in Mexico are primitive, and in many sections quite antiquated. The introduction of American agricultural implements and machinery, by means of the lines of railroads now in course of construction, will undoubtedly work a revolution in the agricultural methods of that country.

The development of the agricultural resources of Mexico has been repressed and dwarfed by the lack of transportation facilities. Articles of food of prime necessity are, in certain localities, so abundant as not to command prices which adequately remunerate the producer, and yet in other localities, less than fifty miles distant, the prices of similar commodities are so high that the laboring classes are unable to purchase them.

The supplying of demands for products of agriculture, chiefly for food in the various States and localities, will undoubtedly give rise to a very large internal commerce and supply a very important local traffic to railroads.

INDIAN CORN.

From the foregoing table it appears that the value of the Indian corn produced is many times greater than the value of any other crop. It is produced in almost every part of the country, and constitutes everywhere food for both man and beast.

WHEAT.

Wheat is produced in Mexico at altitudes from 4,000 to 9,000 feet above the level of the sea, and in all favorable localities north of the latitude of 18° north. Wheat produced in Mexico took the first prize at the Centennial Exposition at Philadelphia in 1876.

Attention is invited to an instructive statement in regard to agriculture in Mexico by Mr. W. W. Nevin, secretary of the Mexican National Construction Company, a gentleman who has made a careful study of the resources of that country. (See Appendix No. 2.)

SUGAR.

In view of the fact that Mexico is a sugar-producing country, and that that commodity stands first in the order of the magnitude of imports into the United States from foreign countries, it is a matter of interest to present here some of the more important facts in relation to the production of sugar in Mexico, and its exportation from that country to the United States.

The following table exhibits the quantity of sugar produced in each one of the sugar-producing States of Mexico during the year 1877–'78:

Statement showing the production of sugar in each of the States of Mexico during the year ended June 30, 1878.

[From Estadistica de la Republica Mexicana, 1877–'78.]

States.	Sugar.	
	Quantity.	Value.
	Pounds.	
Baja-California (Territorio)	99, 225	$5, 625
Campeche	1, 318, 590	74, 750
Coahuila	972, 405	55, 125
Colima	224, 910	12, 750
Chiapas	369, 337	20, 937
Guanajuato	277, 830	15, 750
Guerrero	1, 885, 275	106, 875
Hidalgo	817, 063	46, 318
Jalisco	6, 505, 852	368, 812
Mexico	2, 315, 250	131, 250
Michoacan	18, 852, 750	1, 068, 750
Morelos	29, 106, 000	1, 650, 000
Nuevo Leon	5, 622, 750	318, 750
Oaxaca	15, 655, 500	887, 500
Puebla	11, 576, 250	656, 250
Queretaro	4, 961, 250	281, 250
Sinaloa	6, 956, 775	394, 375
Sonora	4, 873, 050	276, 250
Tabasco	2, 425, 500	137, 500
Tamaulipas	5, 292, 000	300, 000
Vera Cruz	27, 386, 100	1, 552, 500
Yucatan	7, 056, 000	400, 000
Total	154, 549, 662	8, 761, 317

From this table it appears that sugar is produced in all the States bordering upon the Gulf of Mexico and upon the Pacific Ocean, in the States of Nuevo Leon and Coahuila bordering upon the Rio Grande, and in all the interior States south of the State of Zacatecas. Generally it may be stated that sugar is produced in every State in locations of less than 4,000 feet elevation. Of the total sugar product of Mexico, about 85 per cent. is produced south of the State of Zacatecas.

In all that part of the country south of the tropic of Cancer sugar grows at all altitudes from the sea level to 4,000 feet above the sea. The natural rainfall and abundant dews are sufficient for the culture of the sugar-cane to the height of about 2,000 feet, but upon altitudes from 2,000 to 4,000 feet above the sea level, and at points removed from the coast, irrigation is required. At such elevated places the growth of the cane is not so great, but it contains more saccharine matter.

It is impossible at the present time to gain any exact information in regard to the area in Mexico available for the culture of the sugar-cane, or in regard to the increased quantity which would be produced under the stimulus of improved transportation facilities, and of the privilege of importing sugar into the United States from Mexico free of duty.

The exportation of sugar from Mexico at the present time appears to be chiefly an incident of the enormous cost of transportation in that country. All the sugar exported from Mexico is produced on the seaboard and near shipping points on the coast, or near the lines of railroads, it being almost impossible, in consequence of the great cost of internal transportation, to supply the home demand in various parts of the country with domestic sugar. For this reason also sugar is imported into Mexico at various points. At the present time—February, 1884—the price of sugar in the city of Mexico is about twice as high as it is in the city of New York, and its price at other interior points in Mexico is oftentimes from three to even four times as great as at the chief ports of importation in the United States. It is probable that if it were not for the present duty laid by Mexico upon the importation of sugar and the lack of requisite facilities of transportation, large quantities would be exported from the United States to Mexico in order to meet the demand in some localities of that country, which demand can only be met at present, if at all, by the payment of enormous charges for the transportation of domestic sugar.

The following table shows the average annual imports and exports of sugar into and from the United States and Great Britain, in their trade with Mexico:

Average annual imports of sugar from Mexico and of exports to Mexico during the latest three years of commercial statistics.

Countries.	Imports.	Exports.
	Pounds.	*Pounds.*
The United States	*2, 746 907	740, 176
Great Britain	†7, 949, 051	Not stated.

* Three years ended June 30, 1883. † Three years ended March 31, 1882.

The imports of sugar from Mexico consist chiefly of brown sugar, and the exports of sugar to Mexico consist chiefly of refined sugar. It is shown, in Appendix No. 11, that there were 2,019,823,614 pounds of sugar, brown and refined, imported into the United States from foreign countries during the year ended June 30, 1883, of which only 1,792,171 pounds, or less than one-tenth of one per cent., was imported from Mexico.

The total sugar product of Mexico during the year 1877–'78, the latest year for which the data can be obtained, amounted to only 154,549,662 pounds, and constituted only 7 per cent of the quantity imported into the United States from all foreign countries during the last fiscal year.

Unless the production of sugar in Mexico should largely increase, it appears probable that with the facilities of internal transportation which will be supplied by an extensive railroad system, Mexico will require all of her present sugar product for home consumption, and probably import besides a considerable quantity of refined sugar from other countries.

It will be seen by Appendix No. 9 that the average annual sugar product of the State of Louisiana during the last three crop years amounted to 245,308,032 pounds, or 90,758,370 pounds in excess of the total sugar product of Mexico during the year 1877–'78.

Appendix No. 10 shows that about 90 per cent. of the sugar and 70 per cent. of the molasses produced in the United States during the census year was produced in the State of Louisiana.

Attention is invited to Appendix No. 8, which embraces interesting data in regard to the sugar crop of the various countries.

COFFEE.

In view of the fact that Mexico is a coffee-producing country, and that the United States is the chief coffee-importing country of the globe, it is a matter of interest to present here some of the more important facts relative to the production of coffee in that country and its exportation to other countries.

The following table shows the quantity of coffee produced in each State of Mexico during the year ended June 30, 1878:

Statement showing the production of coffee in the several States of Mexico during the year ended June 30, 1878.

States.	Quantity.	Value.
	Pounds.	
Colima	1, 984, 500. 00	$225, 000
Chiapas	726, 062. 40	89, 180
Guerrero	92, 715. 84	10, 112
Michoacan	595, 879. 20	73, 190
Morelos	370, 440. 00	52, 500
Oaxaca	431, 827. 20	81, 600
Tabasco	388, 962. 00	58, 800
Vera Cruz	12, 965, 400. 00	1, 470, 000
Total	17, 555, 786. 64	2, 060, 382

It appears from the above table that the cultivation of coffee in Mexico is confined to the States situated south of the latitude of Tampico, all of which States are within the torrid zone. Coffee is produced upon all suitable lands, from the sea level to an altitude of 5,000 feet, or nearly up to the frost line. The best coffee is produced upon the higher lands. In a few localities removed from the sea-coast artificial irrigation is required.

It is impossible at the present time to speak with any degree of accuracy as to the possible extent of the production of coffee in Mexico.

During the last fiscal year there were 515,878,515 pounds of coffee imported into the United States from foreign countries, of which only 8,578,532 pounds, or 1.66 per cent. was imported from Mexico.

MINERAL PRODUCTS OF MEXICO.

In the richness and variety of her mineral resources Mexico probably surpasses every other country on the globe. The principal mineral products of chief commercial value are gold, silver, iron, copper, lead, tin, mercury, zinc, antimony, cobalt, arsenic, bismuth, nickel, salt, coal, sulphur, gypsum, and lime. Petroleum has also been discovered in several places. The facilities of internal transportation are alone needed in order to take these products from the earth and place them at the gates of commerce.

The baser metals are found in many localities and in great abundance. Iron, the most useful of all the metals, is found in great abundance in many localities. It is said that the iron mountain of Mercados, in the State of Durango, could supply all the furnaces and foundries of Great Britain at their present rate of consumption for more than three centuries.

COAL.

Coal is the great motive power of modern industries and of commerce. Its presence in abundant supply is of much greater importance in promoting the commercial, industrial, and transportation interests of a country than is that of any other mineral product. The future progress of Mexico in commerce and industry, and in the development of her agricultural and mineral resources, probably depends more largely upon the practicability of furnishing to all parts of the country abundant and cheap supplies of coal than upon any other material condition.

Coal is of especial importance in Mexico, both for domestic uses and as a source of motive power, as in that country the work of denuding forest lands has proceeded even further than in the United States. All that is needed in order that this essential agent of modern enterprise and of comfort and domestic utility may be utilized in Mexico, is the construction of railroads which shall connect the principal coal mines of Mexico and of Texas with the various centers of trade and industry, and furnish also at convenient points adequate supplies for the use of the people in all parts of the country.

Coal has already been found in the States of Vera Cruz, Morellos, Tlaxcala, Oaxaca, Chihuahua, Michoacan, Puebla, and Lower California. It has also been discovered on both sides of the Rio Grande River, in the vicinity of the Mexican Central Railroad, the Mexican National Railroad, the Mexican International Railroad, the Mexican Southern Railway, and the American and Mexican Pacific Railway. Veins of both anthracite and bituminous coal, some of them of great thickness, have been discovered in the State of Sonora. Carboniferous formations are said to exist in various parts of the country, affording reason to expect further and important discoveries of coal.

Attention is invited to a statement prepared for this report by Mr. Alexander D. Anderson in regard to the Coal Fields of Mexico. (See Appendix No. 20.)

It is probable that the transportation of coal in Mexico will supply a very large amount of local traffic to the system of railroads now in course of construction in that country.

GOLD AND SILVER.

Heretofore the precious metals—gold and silver—have constituted the mineral products of chief commercial value in Mexico, and it is probable that in the future they will continue to exert directly a much more important influence upon her external commerce than all other mineral products combined. Humboldt estimated that about one-fifth of the silver of the world was produced from the mines of Guanajuato. Mr. Romero, minister of Mexico to the United States, says that since the discovery of America the mines of that country have yielded about two-thirds of the silver product of the globe. In a work entitled "Mexico from the Material Standpoint," Mr. A. D. Anderson states the total gold and silver product of Mexico, from 1521 to 1884, as follows:

Gold	$276,970,173
Silver	3,570,370,247
Total	$3,847,340,420

The difficulties which have heretofore attended the transportation of merchandise in Mexico have operated as a barrier to commerce between the interior and foreign countries. The accumulation of wealth in that country, under such unfavorable conditions regarding foreign trade, has been mainly due to the fact that in her internal commerce she has always enjoyed the advantages of an abundant circulating medium of intrinsic value, which value is derived almost entirely from labor.

The following table, showing the aggregate gold and silver product of the various nations of the globe during the six years from 1877 to 1882, inclusive, has been compiled from tables furnished to this office by the Hon. Horatio C. Burchard, Director of the United States Mint:

Statement showing the production of gold and silver in each country of the globe during the six years from 1877 to 1882, inclusive.

Countries.	Gold.	Silver.	Total.
United States	$240,203,608	$254,887,090	$495,090,698
Russia	169,428,669	2,836,796	172,265,465
Australia	175,199,663	722,111	175,921,774
Mexico	5,770,248	161,286,744	167,056,992
Germany	1,385,691	41,370,049	42,755,740
Austro-Hungary	6,866,011	11,401,938	18,267,949
Sweden	15,306	321,458	336,764
Norway			
Italy	434,250	107,694	541,944
Spain			
Turkey	21,400	304,239	325,639
Argentine Republic	471,276	2,521,350	2,992.626
Colombia	24,000,000	6,000,000	30,000,000
Bolivia			
Chili	6,351,612	75,758,678	82,110,290
Brazil			
Japan	2,427,778	5,101,095	7,528,873
Africa	11,962,800	....	11,962,800
Venezuela	10,261,475	....	10,261,475
Dominion of Canada	3,820,030	272,820	4,092,850
Total	658,619,817	562,892,062	1,221,511,879

From the foregoing table it appears that the total value of the silver product of Mexico during the six years from 1877 to 1882 was $161,286,744, and that it constituted 28 per cent. of the total silver product of the globe.

The silver mines of Mexico probably exceed in richness and extent those of any other country. Owing to the great cost of transportation in Mexico, gold and silver have heretofore been almost the only articles produced in the interior of the country which could be exported in considerable quantities to foreign countries. When the railroad system of the country has been so far extended as to bring cheap fuel and other material to the mines, and to transport their products cheaply to the United States and to the seaboard for exportation, the production of both gold and silver in Mexico will undoubtedly be greatly increased.

Attention is invited to Appendixes 13 to 17 inclusive, which embrace a considerable amount of statistical data in regard to the production of gold and silver in the various countries of the globe.

COMMERCE.

The commercial situation of Mexico, from the earliest period of its recorded history almost to the present day, may be the more clearly appreciated by imagining the situation of that portion of the United States east of the Mississippi River, if it were deprived of all facilities of internal transportation, either by railroad or by water. The area of Mexico is about seven-eighths the size of the part of the United States referred to.

Owing to the near approach of the mountain ranges to the seaboard—the Sierra Madre Oriental at the east and the Sierra Madre Occidental at the west—none of the rivers of Mexico are navigable to any great distance from the sea, and only for vessels of light draught. But even greater obstacles present themselves to foreign commerce. The eastern coast, which is turned toward the great commercial nations of the globe, is, in consequence of its unhealthfulness, repellant to the mariner. Besides, the ascent to the high lands presents such difficulties to transportation by animal power as to constitute an almost insuperable barrier to foreign commerce. Mexico, therefore, has heretofore been, and is even at the present time, much less favorably situated with respect to foreign commerce than was the United States prior to the completion of the Erie Canal and the introduction of railroad transportation east of the Mississippi River.

From the time of the Spanish conquest to the present time the necessities of an interchange of the products of labor have been met in Mexico chiefly by internal trade. The development of the country to its present degree of attainment in wealth and in social well-being has been limited almost entirely to this commercial condition. But the means of internal transportation being supplied only by animals—chiefly the pack-mule and the Indian peon—the internal trade of the country has been merely local.

Trade between different States, and to a great extent between distant parts of the same State, has been entirely impracticable, notwithstanding the fact that the great differences which exist in the agricultural and mineral productions of the different parts of the country constitute a condition highly favorable to a profitable internal commerce. The mining of coal, for example, in order to be successful, must be carried on in a large way; but the difficulties attending transportation have operated as an absolute embargo upon a profitable coal trade within the borders of the country. The managers of the railroad connecting Vera Cruz with the city of Mexico find it more economical to import coal from England for generating steam in their locomotives than to purchase wood, which must be transported on the backs of mules from points 20 to 30 miles distant from the line of their road.

But even under such unfavorable conditions, with respect to internal transportation, the Mexicans have subdued the land to the arts of the agriculturalist and the miner; they have builded in the interior many large towns and cities, and in other visible evidences of the results of labor have amassed an amount of wealth which, under the circumstances, is somewhat surprising. The people of the country have, of course, acquired habits and accommodated their social, industrial, and commercial methods to the limited possibilities of such primitive modes of transportation.

The construction of railroads extending to all the chief centers of trade and of industry, and placing all parts of the country in direct communication by rail with the United States, will undoubtedly in the course of a few years work a commercial revolution.

THE FOREIGN COMMERCE OF MEXICO.

During the year ended June 30, 1880, the value of the imports and exports of Mexico was, according to the best available data, as follows:

Imports	$24,003,372
Exports	32,663,554
Total	56,666,926

The value of exports from Mexico during each year since 1873, for which data can be procured, has been as follows for the year ended June 30—

1873	$35,594,005
1874	27,688,703
1875	27,318,788
1878	29,285,660
1879	29,891,477
1880	32,663,554
1882	29,083,293
1883	41,807,595

The value of the exports during the year ended June 30, 1883, consisted of—

The precious metals	$29,628,658
Other commodities	12,178,937
Total	41,807,595

From an official statement of the Mexican Government it appears that the exports of the precious metals during the year ended June 30, 1883, were as follows:

Articles.	Values.
Silver:	
Coined	$22,969,583 90
Bullion	4,773,928 15
Ore	562,084 58
In sulphur	105,512 26
Manufactured	30,104 62
Lead, argentiferous	13,025 40
Gold:	
Coined	331,708 00
In bars	548,039 23
Silver, foreign, coined	146,615 59
Gold, foreign, coined	148,055 96
Total	29,628,657 69

From the above table it is seen that of the total exports of the precious metals in their various forms $28,600,854.50 consisted of silver and $1,027,803.19 of gold.

The exports of articles other than the precious metals during the year ended June 30, 1883, consisted of the following commodities:

Commodities.	Value.	Commodities.	Value.
Henequen (a kind of hemp)	$3,311, 062 64	Indian Corn	$63, 684 11
Lumber	1, 917, 323 67	Horse hair	62, 007 77
Coffee	1, 717, 190 85	Sarsaparilla	50, 699 04
Hides and skins	1, 653, 165 92	Lead	47, 554 83
Istle	596, 533 23	Mother of pearl	44, 414 00
Animals, living	634, 376 18	Medical plants	34, 592, 41
Vanilla	443, 850 75	Sugar-crust	32, 132 17
Tobacco	272, 160 18	Chick-pea, a kind of pulse	28, 855 44
Sugar	198, 365 16	Leguminous pulse	19, 596 60
Catechu	159, 882 72	Pearls	18, 500 00
Roots	123, 438 01	Spices	17, 884 87
Honey	115, 817 56	Cereals	2, 868 00
Beans	90, 641 11	Aniline	630 50
Calicoes (Indian)	82, 205, 38	Cacao	503 00
Fruits	78, 898, 42	Other articles	219, 478 46
Dye-wood	74, 628 68		
Copper	65, 996 00	Total	12, 178, 937 66

A statement is appended hereunto, Appendix No. 18, which shows the quantity and value of the commodities of each sort exported from Mexico at each seaport and at each point of trade along the United States border line. From this statement it appears that of the total exports of the precious metals from Mexico, about 72 per cent. was exported from Gulf ports, and about 28 per cent. from Pacific coast ports and points on the northern frontier, and that of the total exports of merchandise from Mexico, about 80 per cent. was exported from Gulf ports and about 20 per cent. from Pacific coast ports and points on the northern frontier.

Generally it may be said in regard to the exports of Mexico that, with the exception of the precious metals and products of the sea, they consist chiefly of articles produced near the seaboard or near the railroad extending from Vera Cruz to the City of Mexico.

The precious metals are almost the only commodities which can bear the great cost of transportation from the remote interior to the seaboard. But the development even of the extensive and rich gold and silver mines of the country is greatly limited by this condition.

The following table exhibits the value of the exports of the precious metals, and of other commodities from Mexico to the several foreign countries during the fiscal year ended June 30, 1883:

Countries.	Exports.		
	The precious metals.	Other commodities.	Total.
England	$15, 201, 600 36	$2, 056, 642 25	$17, 258, 242 61
United States of America	9, 036, 773 33	7, 702, 324 37	16, 739, 097 70
France	3, 561, 987 13	642, 918 42	4, 204, 905 55
Spain	1, 035. 013 00	954, 245 74	1, 989, 258 74
Germany	392, 955 92	732, 763 29	1, 125, 719 21
United States of Colombia	298, 937 55	59, 229 59	358, 167 14
Guatemala	92, 875 00	686 00	93, 561 00
Belgium		29, 040 00	29, 040 00
San Salvador	8, 515 40	288 00	8, 803 40
Italy		300 00	300 00
Venezuela		300 00	300 00
Ecuador		200 00	200 00
Total	29, 628, 657 69	12, 178, 937 66	41, 807, 595 35

From the foregoing table it appears that the exports of the precious metals to England during the year ended June 30, 1883, amounted to $15,201,600, and to the United States to $9,036,773, but that the value of the exports of merchandise to England amounted to $2,056,642 and to the United States to $7,702,324.

According to the statistics of the United States, Great Britain, France, and Spain, the aggregate value of the exports of merchandise to Mexico and of the imports of merchandise from Mexico during the latest year for which the data can be obtained was as shown in the following table:

Imports into—	
The United States (fiscal year 1883)	$8, 177, 123
Great Britain and Ireland (calendar year 1882)	2, 218, 531
France (calendar year 1882)	1, 797, 737
Spain (calendar year 1879)	683, 906
Exports from—	
The United States (fiscal year 1883)	16, 587, 620
Great Britain and Ireland (calendar year 1882)	9, 526, 252
France	10, 119, 841
Spain (calendar year 1879)	218, 751

The foreign commerce of Mexico has heretofore been almost entirely maritime. By this mode of commercial intercourse the United States has not enjoyed any marked advantages over other countries in trade with that country. But a new era has dawned upon the history of commercial intercourse between the two countries by the establishment of the facilities of transportation over railroads now in course of construction. Such facilities will afford extensive and exclusive means of building up a large and mutually beneficial trade between the two contiguous countries.

COMMERCE OF MEXICO WITH THE UNITED STATES.

The following tables exhibit the value of imports of merchandise and of gold and silver into the United States from Mexico, and of exports of merchandise and of gold and silver from the United States to Mexico, during the 17 years from 1867 to 1883, inclusive:

Statement showing the values of the commerce of the United States with Mexico.

MERCHANDISE.

Year ended June 30—	Exports.		Total exports.	Imports.	Total imports and exports.
	Domestic.	Foreign.			
1867	$4, 823, 614	$572, 182	$5, 395, 796	$1, 071, 936	$6, 467, 732
1868	5, 048, 420	1, 392, 919	6, 441, 339	1, 590, 667	8, 032, 006
1869	3, 835, 699	1, 047, 408	4, 883, 107	2, 336, 164	7, 219, 271
1870	4, 544, 745	1, 314, 955	5, 859, 700	2, 715, 665	8, 575, 365
1871	5, 044, 033	2, 568, 080	7, 612, 113	3, 209, 688	10, 821, 801
1872	3, 420, 658	2, 122, 931	5, 543, 589	4, 002, 920	9, 546, 509
1873	3, 941, 019	2, 323, 882	6, 264, 901	4, 276, 165	10, 541, 066
1874	4, 016, 148	1, 930, 691	5, 946, 839	4, 346, 364	10, 293, 203
1875	3, 872, 004	1, 865, 278	5, 737, 282	5, 174, 594	10, 911, 876
1876	4, 700, 978	1, 499, 594	6, 200, 572	5, 150, 572	11, 351, 144
1877	4, 503, 802	1, 389, 692	5, 893, 494	5, 204, 264	11, 097, 758
1878	5, 811, 429	1, 649, 275	7, 460, 704	5, 251, 502	12, 712, 206
1879	5, 400, 380	1, 351, 864	6, 752, 244	5, 493, 221	12, 245, 465
1880	6, 065, 974	1, 800, 519	7, 866, 493	7, 209, 593	15, 076, 086
1881	9, 198, 077	1, 973, 161	11, 171, 238	8, 317, 802	19, 489, 040
1882	13, 324, 505	2, 158, 077	15, 482, 582	8, 461, 899	23, 944, 481
1883	14, 370, 992	2, 216, 628	16, 587, 620	8, 177, 123	24, 764, 743

Statement showing the values of the commerce of the United States with Mexico—Continued

GOLD AND SILVER.

Year ended June 30—	Exports.		Total exports.	Imports.	Total imports and exports.
	Domestic.	Foreign.			
1867	$38, 452	$18, 000	$56, 452	$2, 849, 038	$2, 905, 490
1868	12, 924		12, 924	4, 525, 255	4. 538, 179
1869	2, 000		2, 000	4, 895, 842	4, 897, 842
1870	11, 696	4, 000	15, 696	10, 383, 366	10, 399, 062
1871	38, 500		38, 500	14, 301, 475	14, 339, 975
1872	25, 000	10, 000	35, 000	4, 504, 204	4, 539, 204
1873	143, 797	21, 465	165, 262	12, 154, 060	12, 319, 322
1874	57, 531		57, 531	8, 893, 541	8, 951, 072
1875	23, 788	9, 713	33, 501	6, 460, 389	6, 493, 890
1876	5, 800	1, 800	7, 600	7, 355, 181	7, 362, 781
1877	5, 239		5, 239	10, 240, 319	10, 245, 558
1878	32, 180		32, 180	8, 394, 146	8, 426, 326
1879	5, 040	4, 000	9, 040	8, 554, 598	8, 563, 638
1880	3, 371		3, 371	9, 115, 824	9, 119, 195
1881		1, 500	1, 500	9, 136, 324	9, 137, 824
1882	8, 995	9, 451	18, 446	6, 631, 938	6, 650, 384
1883	5, 120	91, 844	96, 964	9, 782, 986	9, 879, 950

The following table exhibits in detail the quantities and values of commodities of all kinds imported into the United States from Mexico, and exported from the United States to Mexico, during the year ended June 30, 1883:

Statement showing the quantities and values of imports into the United States from, and of exports from the United States to, Mexico during the year ended June 30, 1883.

Articles.	Quantities.	Values.
IMPORTS.		
Free of duty.		
Articles, the product or manufacture of the United States, brought back, not elsewhere specified		$82, 847
Chemicals, drugs, dyes, and medicines, not elsewhere specified		52, 100
Coffee ... pounds	8, 578, 532	809, 757
Dye-woods, in sticks ... cwts	199, 585	211, 714
Gums ... pounds	400, 439	67, 479
Hair, unmanufactured ... pounds	248, 570	52, 985
Hides and skins, other than furs		1, 568, 645
India rubber and gutta-percha, crude ... pounds	241, 478	123, 484
Wood, unmanufactured		441, 083
All other free articles		801, 234
Total, free of duty		4, 211, 328
Subject to duty.		
Animals, living		661, 245
Breadstuffs, and other farinaceous food		72, 264
Fruits of all kinds, including nuts		86, 191
Jute, and other grasses, and manufactures of:		
Raw ... tons	25, 065	2, 712, 088
Manufactures of, not elsewhere specified		105, 418
		2, 817, 506
Precious stones		56, 176
Sugar and molasses:		
Sugar, brown ... pounds	1, 792, 171	63, 419
Molasses ... gallons	3, 953	1, 101
		64, 520

Statement showing the quantities and values of imports and exports, &c.—Continued.

Articles.	Quantities.	Values.
IMPORTS—Continued.		
Subject to duty—Continued.		
All other dutiable articles		$207,893
Total subject to duty		3,965,795
Merchandise		8,177,123
Specie		9,782,986
Total imports		17,960,109
EXPORTS OF DOMESTIC COMMODITIES.		
Agricultural implements		97,957
Animals, living:		
Horned cattle ... number	1,812	47,492
Horses ... number	764	67,236
Mules ... number	624	48,856
Sheep ... number	235,585	364,866
All other, and fowls		38,621
		567,071
Beer, ale, and porter:		
In bottles ... dozen	73,639	133,472
In casks ... gallons	32,476	15,631
		149,103
Books, pamphlets, maps, and other publications		43,057
Bread and breadstuffs:		
Bread and biscuit ... pounds	673,821	62,412
Indian corn ... bushels	476,453	391,751
Wheat flour ... barrels	21,513	176,560
All other breadstuffs, and preparations of, used as food		58,180
		688,903
Candles, tallow, and other ... pounds	596,708	66,130
Carriages, carts, and parts of		122,109
Cars, railroad, passenger and freight ... number	839	717,277
Clocks, and parts of		41,018
Coal:		
Anthracite ... tons	6,165	28,960
Bituminous ... tons	11,422	52,463
		81,423
Cotton, and manufactures of:		
Unmanufactured ... pounds	20,577,771	2,217,259
Colored ... yards	6,114,541	441,252
Uncolored ... yards	3,523,873	292,009
All other manufactures of, not elsewhere specified		185,329
		3,135 849
Drugs, chemicals, and medicines, not elsewhere specified		261,363
Fancy articles, not elsewhere specified		104,302
Fruits:		
Apples, green, ripe, and dried		18,174
Other fruit, green, ripe, or dried		16,643
Preserved, in cans or otherwise		21,575
		56,392
Glass and glassware		159,099
India-rubber and gutta-percha manufactures:		
Boots and shoes ... pairs	2,970	1,687
All other manufactures		55,685
		57,372

Statement showing the qnantities and values of imports and exports, &c.—Continued.

Articles.	Quantities.	Values.
EXPORTS OF DOMESTIC COMMODITIES—Continued.		
Iron and steel:		
Iron, and manufactures of—		
Car-wheels ... number..	3, 238	$46, 365
Steam-engines, locomotive ... number..	54	603, 473
Steam-engines, stationary ... number..	32	40, 376
Boilers for steam-engines, when separate from the engines		20, 012
Machinery, not elsewhere specified		1, 171, 809
Nails and spikes ... pounds..	1, 503, 990	55, 224
Iron, and all other manufactures of		985, 962
Steel, and manufactures of—		
Edge tools		147, 324
Fire-arms		217, 335
Steel, and all other manufactures of, not elsewhere specified		107, 648
		3, 395. 528
Lamps		50, 502
Leather, and manufactures of:		
Boots and shoes ... pairs..	73, 104	86, 788
Saddlery		24, 812
Leather, and all other manufactures of		40, 290
		151, 890
Mathematical, philosophical, and optical instruments		67, 627
Oils: Mineral, refined—		
Illuminating ... gallons..	1, 755, 835	249, 404
All other		36, 495
		285, 899
Ordnance stores:		
Cartridges and fuses		$119, 491
Gunpowder ... pounds..	1, 743, 484	303, 783
		423, 274
Paints and painters' colors		44, 807
Paper and stationery		180, 538
Provisions:		
Bacon and hams ... pounds..	243, 583	37, 955
Butter ... pounds..	124, 913	30, 470
Fish, dried, smoked, pickled, and other cured		28, 084
Lard ... pounds..	1, 392, 134	163, 797
Potatoes ... bushels..	22, 976	23, 722
All other		59, 937
		343, 965
Quicksilver ... pounds..	1, 043, 635	394, 572
Sewing-machines, and parts of		312, 854
Soap:		
Perfumed, and all toilet		2, 239
Other ... pounds..	811, 493	46, 422
		48, 661
Sugar and molasses:		
Sugar, brown ... pounds..	19, 250	2, 168
Sugar, refined ... pounds..	625, 714	63, 027
Molasses, candy, and confectionery		8, 103
		73, 298
Tallow ... pounds..	439, 282	40, 515
Tobacco, and manufactures of:		
Leaf ... pounds..	1, 091, 034	127, 522
Manufactures of		13, 663
		141, 185
Wearing apparel		46, 568

Statement showing the quantities and values of imports and exports, &c.—Continued.

Articles.	Quantities.	Values.
EXPORTS OF DOMESTIC COMMODITIES—Continued.		
Wood, and manufactures of:		
Boards, clapboards, deals, planks, joists, and scantling .... M feet..	26,211	$545,061
Shingles .... M..	6,116	21,705
All other lumber		202,139
Timber, sawed and hewed .... cubic feet..	664,399	190,179
All other timber, including fire-wood		43,743
Household furniture		213,844
Wooden ware		31,049
All other manufactures of, not elsewhere specified		137,700
		1,385,420
All other articles		635,464
Merchandise		14,370,992
Specie		5,120
Total domestic exports		14,376,112
EXPORTS OF FOREIGN COMMODITIES.		
Merchandise		2,216,628
Specie		91,844
Total foreign exports		2,308,472
Total exports, domestic and foreign		16,684,584

From this table it appears that the more important commodities, in the order of magnitude of value, imported from Mexico free of duty, were hides and skins, coffee, valuable woods, used in the manufactures, and dye-woods in sticks. The more important dutiable articles imported were jute and other grasses, live animals, and fruit.

It appears, also, that the principal articles exported to Mexico were, in the order of magnitude of value, iron and steel and manufactures thereof, raw cotton, railroad passenger cars and freight cars, bread and breadstuffs, and live animals.

Attention is invited to Appendix No. 25, which shows separately the quantities and values of the principal commodities imported into the United States from Mexico, and the quantities and values of the principal commodities exported from the United States to Mexico, from 1858 to 1883, inclusive:

THE PROPOSED RECIPROCITY TREATY BETWEEN THE UNITED STATES AND MEXICO.

On the 20th of January, 1883, a reciprocal treaty of commerce was concluded at Washington between representatives of the United States and of Mexico.*

This treaty is understood to be now† before the Senate of the United States, and awaiting the decision of that body. It is aside from the duties of this office to discuss the advisability of making such a treaty or to consider any question as to whether the proposed treaty is or is not equitable in its various bearings, or to consider it in its relations to the questions of Governmental finance, or in its probable effects upon special industrial interests in the United States. It is proper, however, here to describe the commercial features of the proposed treaty apparent upon its face, and illustrated in detail in the statistical information published in the annual and quarterly statements of this office in regard to imports and exports and customs revenues. Appendix No. 6 shows the articles proposed to be admitted into the United States from Mexico free of duty, and Appendix No. 7 shows the articles proposed to be admitted into Mexico from the United States free of duty. Both schedules embrace quite a number of articles which are now admitted from the one country into the other free of duty, and articles which are now dutiable, with the rates of duty thereon.

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* This treaty was signed by General U. S. Grant and Mr. William Henry Trescott, on the part of the United States, and by Señor Don Matias Romero and Señor E. Canedo, on the part of Mexico.

† February 6, 1884.

With respect to articles which are now admitted from the one country into the other free of duty the treaty merely constitutes a reciprocal guaranty that such articles shall remain free of duty. The more important concessions to be made by the two countries under the terms of the proposed treaty are as follows: The United States offers to admit from Mexico, free ot duty, barley, beef, fruits of all kinds, hemp, and sisal grass and other substitutes for hemp, sugar not above No. 16 Dutch standard in color, *i. e.*, brown or unrefined sugar, molasses, tobacco in leaf, and vegetables; Mexico, on the other hand, offers to admit from the United States, free of duty, books, iron and steel in various forms, machinery, implements, tools, instruments, and apparatus of all kinds for industrial, agricultural, and mining purposes, and for use in the various arts, coaches and carriages of all sorts, carts, wheelbarrows, railroad cars, locomotives, fire-engines, pumps, stoves, clocks, fresh vegetables, fresh fish, crude and refined petroleum and naphtha, powder for mining purposes, steam-engines, sewing machines, and materials of the printer's art.

In a word, the proposed treaty provides that the United States shall admit from Mexico, chiefly, products of agriculture, of mining, and of the forest; and that Mexico shall admit from the United States, free of duty, chiefly, manufactured articles. The two schedules include the principal commodities embraced in the commerce between the two countries, and which will constitute the principal part of the traffic of the several international railroad lines projected, and now in course of construction. Of course the proprietors of these railroads are deeply interested in the ratification of the treaty by the United States. It appears evident, also, that its ratification would tend greatly to promote trade between the two countries, which trade will probably center largely at New Orleans and at Saint Louis.

From time immemorial, customs duties have been laid upon merchandise shipped from one State of Mexico into another. The proposed treaty provides that all State duties shall be removed from goods embraced in the schedule of articles to be imported into Mexico from the United States free of duty.

It is a matter ot interest in this connection to note also the fact that an earnest effort is being made in Mexico to abolish interstate customs duties and octroi taxes upon domestic merchandise. Such duties and imposts have prevailed in Mexico from time immemorial, but they are evidently relics of a past age. That such impediments to commerce among the States in Mexico will before long be removed seems probable, especially in view of the fact that the exemption of merchandise the product of the United States from such charges would be likely to work an injurious discrimination against the products of labor in Mexico

THE SECURITY OF LIFE AND PROPERTY IN MEXICO AND THE PRESENT ENCOURAGEMENTS TO COMMERCIAL ENTERPRISE IN THAT COUNTRY.

In the foregoing statements an attempt has been made to present, in a condensed form, the resources of Mexico, some of the more important facts descriptive of its people, their material advancement, and the geographical, topographical, and climatic conditions which constitute their environment with respect to commerce with other countries, and especially with the United States. These conditions appear to be in a high degree favorable to the development of commerce over the several railroads now in course of construction, the object of which railroads is to connect Mexico very intimately in the bonds of trade and of personal intercommunication with the people of this country. It remains to consider the question as to the present security of life and property in Mexico and as to the disposition of the people of that country toward the people of the United States, with especial reference to the interests of trade. The success of American commercial enterprise in Mexico also turns upon the question as to the probable permanence of the existing national Government, and its ability to protect American citizens in the pursuits of commerce and of industry in that country. Serious doubts have existed and still exist in the minds of the people of this country upon these points. The question as to the ability of the Government of Mexico to fulfill its obligations toward the projectors and constructors of railroads connecting the two countries is also of interest, cepecially as those enterprises are now almost entirely in the hands of itizens of the United States.

The consideration of these important matters in the present report suggests a brief allusion to some facts of especial importance in the history of Mexico.

The city of Mexico was captured by the Spaniards under Cortez in 1521, and in 1821—just three hundred years afterwards—the Mexicans, under the leadership of Iturbide, achieved their independence. From that time until the defeat of Maximilian, in 1867, Mexico passed through a series of revolutions.

In the year 1836, Texas, a Territory of Mexico, achieved her independence, and in the year 1845 was admitted as a State of the American Union.

In the month of May, 1846, war broke out between the United States and Mexico, and continued until the capitulation of the City of Mexico, September 14, 1847. By the treaty of Guadalupe Hidalgo, concluded February 2, 1848, and of the so-called Gadsden treaty, concluded December 30, 1853, the United States acquired from Mexico all that territory which now constitutes the States of California and Nevada, the Territories of Utah and Arizona, and a part of the State of Colorado and of the Territories of Wyoming and New Mexico.

These territorial acquisitions, including the State of Texas, embraced an area of 967,451 square miles, or considerably more than half the territory of Mexico prior to the Texan revolution. It is not a strange thing that memories of the struggles whereby these losses of so large a proportion of her ancient domain were incurred should have left an inheritance of bitterness in the minds of the Mexicans toward the people of the United States. But time and a growing appreciation of the advantages which would inevitably accompany the establishment of commercial intercourse over railroad lines connecting all parts of Mexico with the centers of trade and of industry in the United States have tended greatly to soften these asperities.

The active sympathy extended by the United States toward Mexico during the struggle to free herself from the rule of a foreign invader also tended greatly to allay the old feeling of animosity. In the year 1862, England, France, and Spain sent into Mexico an army for the ostensible purpose of securing payment of certain foreign debts, the payment of which had been deferred for two years. England and Spain soon afterwards withdrew their forces, but France continued the struggle, and in the year 1864 Maximilian was enthroned as emperor.

At the close of our civil war the Government of the United States made haste to inform the Government of France that the presence of her forces upon the soil of Mexico was distasteful to this country, and at the same time seventy thousand veteran soldiers under General Sheridan moved toward the Rio Grande. As the result of diplomatic correspondence between the United States and France, the evacuation by the French forces was postponed for two years. Finally the defeat of the forces of Maximilian, which occurred May 15, 1867, and the surrender of the city of Mexico about three months afterward, terminated the rule of the invader. The moral support of our Government won the gratitude of the adherents of the patriot cause, the party which is still in power, and this feeling found enthusiastic expression on the occasion of the visit of Mr. Seward to Mexico in the year 1869, a visit made in compliance with the expressed desire of the authorities of that country.

The growth of confidence in the minds of the people of the United States in the permanence of the newly-established Government of Mexico and its ability and disposition to protect American citizens in that country, has, of course, been slow. This has probably been due largely to a failure to appreciate properly the cause and nature of the several civil conflicts which have been waged in Mexico since the expulsion of the Spaniards in the year 1821, and the consummation which has finally been reached. It is thought that a brief reference to this prolonged struggle will aid in arriving at a correct view of the present situation of the country with respect to the interests of trade.

The various appeals to arms in Mexico during the period from 1821 to 1867 have undoubtedly been to a considerable extent instigated by and in the interest of partisan leaders, but those contests have generally shaped themselves to issues incident to the rule of a despotic hierarchy.

Soon after the expulsion of the Spaniards in 1821, the Government of the country fell into the hands of the church. It administered the civil offices, it controlled the army, and its influence in the financial affairs of the country was supreme. There was not in Mexico a union of church and state, but simply an ecclesiastical government. Besides, the church had acquired vast landed possessions.

It is estimated that in the year 1859 the value of its property was about one-third of the value of the property of the entire country. The church is also said to have owned half the area of the city of Mexico, and more than half its value. Consul-General Strother, in a report to the Department of State, under date of December 23, 1882, says that the former wealth of the church has been estimated at $300,000,000, and adds, "it is not improbable that this estimate falls short of the truth."

It is impossible in a few brief words to describe the evils and abuses attendant upon such a state of affairs, for the conditions under which those evils and abuses existed were almost as unlike the conditions which surround the people of the United States as were the conditions which determined the social and political life of the Assyrian Empire. Nor is it possible here to describe fully the struggle through which Mexico has passed in throwing off the yoke of despotism. Suffice it to say, that she rid herself of the old Spanish rule in the year 1821, and that she has ever since been slowly but steadily groping her way out of the darkness of the fifteenth century. The period from 1821 to 1875 was one of turmoil and revolution. The outside world, ignorant of the real state of affairs, began to think the Mexicans incapable of self-government. But looking above the passions of men, and the issues by which these sanguinary struggles were engendered, the philosophical historian will undoubtedly regard the long-continued internecine strife which terminated in the overthrow of the church power and the establishment of a government based solely upon political considerations and charged only with political functions, as an evolution from a lower to a higher civilization.

The power of the church was overthrown in the year 1857 under the leadership of Juarez, but was temporarily reinstated under the reign of Maximilian, whose enthronement in 1864 was attained mainly through the support which he gained from the church party. Since the failure of the Government thus instituted, that party has borne the ignominy of having entered into an alliance with a foreign usurper.

The fall of Maximilian in 1867 marked the termination in Mexico of an irrepressible conflict between opposing and irreconcilable forces, the result of which has been the triumph of the cause of civil and religious liberty.

The Government which has been in existence since December 20, 1876, the date of the accession to power of General Diaz, presents claims to confidence in its permanency from the fact that the cause of internal strife has probably been forever removed. This achievement has given the world assurance of the political regeneration of Mexico, and it has placed her in full fellowship with the more advanced nations of the globe.

In all the history of political revolutions involving ecclesiastical change, it would be difficult to point to one more radical and sweeping in its results than has been the change in Mexico from an integral union of church and state to their absolute divorcement. As in political struggles involving questions of principle one extreme is apt to follow another, so we see in Mexico that in the overthrow of the former ecclesiastical power the Government has resorted to the extreme measures of confiscating *or nationalizing* the entire properties of the church, expelling from the country the *personnel* of its religious societies, forbidding religious processions on the public streets, and forbidding also all ministers of religion from appearing on the public streets in any other garb than that worn by citizens generally.

Perhaps the most remarkable feature of this wonderful reform in the constitution of the Mexican Government is the fact that it has been the result of a struggle purely political in its nature. Unlike political changes involving the separation of church and state in several of the countries of Europe it has been accomplished without the intervention of any dissenting religious element whatever.

Among the prominent political reformers of Mexico there have been many adherents of the old faith, and very few, if any, of dissenting belief. The struggle has simply illustrated the incompatibility of a copartnership between politics and religion—at least in Mexico—and as such the result must be gratifying to every lover of religious liberty in this country, without regard to creed.

Since the ecclesiastical power in the political affairs of Mexico has been broken down, the national Government, and almost all the State governments of the country, have accorded to other religious denominations full liberty to propagate the tenets of their several creeds, and in certain notable instances the State governments have extended to such societies courteous treatment and material aid. It appears to be the policy of the Government to foster the growth of dissenting churches, with the special purpose of restraining the influence exerted by the old church.

It is no part of the object of this report to express any opinion as to the merits of the concrete questions which the Mexicans have been so long and so hotly debating touching the relations of church to state, or to view the matter in any other light than in its purely commercial aspects. The precise point had in view, and which it is desired here to elucidate and illustrate, is, that if civil and religious liberty have been secured in Mexico, and American missionaries of every denomination are allowed freely to pursue their calling in that country, once intolerant of any form of religious belief at variance with the State religion, it is certainly safe to assume that its Government and people are now in a condition to receive hospitably the American merchant, the American manufacturer, and the American railroad builder and operator, and to accord to all who come with commercial intent adequate protection under its laws in the prosecution of their business pursuits.

Although Mexico and the United States are territorially contiguous, yet there has been much less intermingling of the people of the two countries than has been the case with respect to the people of the United States and those of the several countries of Europe, or of South America, or even perhaps of China. The real import of events in Mexico is consequently not very generally understood in this country. It is deemed proper, therefore, to present the following evidences of religious toleration in Mexico, and also of the friendly disposition of the people of that country toward the people of the United States.

RELIGIOUS TOLERATION IN MEXICO AS AN EVIDENCE OF THE SECURITY OF LIFE AND PROPERTY.

In an article entitled "Railways in Mexico," published in November, 1882, Mr. Romero, minister plenipotentiary from Mexico to the United States, says, in regard to his country:

> From a bigoted, intolerant country it has been changed into a liberal, progressive nation; and this, of course, could not have been effected without great effort and without commotion and bloodshed to some extent. Neither England nor France nor other countries standing now at the head of the civilized world could establish civil and religious freedom without revolution and bloodshed. But once accomplished, all the purposes of the revolution and freedom of religion, freedom of education, equality before the law, trial by jury, &c., established, there is no political reason for revolution.

In an official report to the Department of State, dated December 23, 1882, Hon. David H. Strother, consul-general of the United States at the City of Mexico, says:

> After fifty years of almost continuous wars and revolutions, the party of liberal opinions has at length definitely triumphed.
>
> The results of this triumph have been the complete separation of church and state, and the absolute subjection of the ecclesiastical to the civil authority; a political constitution, based on the broadest republican principles; a free press, free schools, and

universal religious toleration. Indeed, the laws of the reform, proclaimed in 1857 under Comonfort, and executed by Benito Juarez in 1867, after the downfall of the empire, are more thorough and radical in their character than those promulgated by any Government of modern times.

The Rev. Theodore S. Wynkoop, pastor of the Western Presbyterian church of Washington, D. C., who has recently returned from a tour of Mexico, in a friendly letter addressed to the chief of this Bureau, under date of December 20, 1883, says:

> The gist of the religious situation in Mexico is: 1st. Nobody wants to interfere with the fullest religious liberty of foreigners coming to reside in that country. 2d. So far as efforts to detach the people of the land from the Roman Catholic Church are concerned the Government and the intelligent party of progress in Mexico desire to break the exclusive control of the Romish church, and will encourage Protestant Christianity, believing that the interests of Mexico will thereby be promoted.

The following statistics in regard to the Missions of the Protestant Episcopal Church in the United States are presented in the last annual report of the committee for foreign missions of that church:

Number of places where divine worship is held	45
Total number of persons connected with the church in Mexico	3,490
Number of communicants	1,480
Number of mission schools	9
Number of scholars in mission schools	390

In neither of the last two annual reports of the secretary of the league in aid of the Mexican branch of this church is there mention made of any violent opposition to its ministrations.

It is stated in the last annual report of the Board of Foreign Missions of the Presbyterian Church in the United States that there are now in Mexico, under the patronage of that church, 56 clerical and lay missionaries, 7,220 communicants, and 392 scholars in its mission schools. The secretary of that Board, in reply to an inquiry addressed to him by this office, makes the following statement, under date of December 21, 1883:

> I am glad to state that we have met with no hinderance from the authorities of any Mexican State of late years. Several years ago there was violent opposition in at least two States, but that has ceased, and in both our missionaries can pursue their work in peace. I refer to *public* or official opposition. Of course local disturbances, instigated by the priests, directly or indirectly, still sometimes occur, but the authorities generally discountenance such outbreaks, and use their influence commonly to protect our missionary friends and their native assistants. The Presbyterian missions of Mexico are located in several different States.

In a recently published account of travels in Mexico, Mr. Howard Conkling, of New York, mentions the fact that the State of Zacatecas had extended valuable aid and assistance toward the erection of a Presbyterian church in the city of that name.

The inauguration of missions in Mexico by the Southern Baptist Convention, appears to be of rather recent date. In the proceedings of the twenty-eighth annual session of that body, held May, 1883, it is stated that missions have been established in Mexico under its care at Saltillo, Progreso, Juarez, Musquez, Sabinas, Lampasas, and other places. Six missionaries have been sent out from the United States, and besides several native assistants are engaged in the work.

A circular of this organization dated October 22, 1883, states that the governor and people of the State of Coahuila have recently offered to the Baptists $150,000 for the purpose of establishing five schools in Mexico, mainly for the education of girls. It is provided that free tuition shall be given to orphans and to the daughters of poor widows, and that entire religious freedom shall be secured to all the pupils of the schools.

The annual report of the Methodist Episcopal Church for the year 1882, rendered January, 1883, mentions that there are now employed in the work of the missions of that denomination in Mexico 36 missionaries and assistant missionaries, including also native ordained, unordained, and local preachers. Of these 22 were sent out from the United States and 14 are natives. Besides there are 14 native workers of the Woman's Foreign Missionary Society and 36 native and foreign teachers and other helpers. The number of church members is 356 and the average attendance 1,139. This denomination now has 10 churches and 15 halls and other places of worship in Mexico.

In a letter addressed to the chief of this Bureau, under date of December 24, 1883, the corresponding secretary of the Missionary Society of the Methodist Episcopal Church, says:

> So far as the General Government is concerned we have nothing to complain of. We have found the President and other general officers entertaining the most liberal views, and ready to respond for our protection whenever called upon. Our missionaries have several times been assailed, their homes mobbed, their persons injured, and their lives imperiled. In one case one of our native preachers was put to death. The local authorities in some instances have winked at these things, but when we have appealed to the General Government it has promptly relieved us.

It is believed that a knowledge of the foregoing facts and an appreciation of their import will tend to encourage a feeling on the part of the people of the United States that American citizens can find adequate protection in Mexico for their persons and property, and that it is a safe and inviting field for commercial enterprise.

THE PERMANENCY OF THE PRESENT GOVERNMENT OF MEXICO AND ITS DISPOSITION TOWARD THE CULTIVATION OF CLOSER COMMERCIAL RELATIONS WITH THE UNITED STATES.

The Government of Mexico has recently in an unmistakable manner proved its faith in its own power and permanency and its desire to cultivate commercial intercourse with the United States by granting most liberal concessions to corporations of the United States for the purpose of constructing an extensive system of railroads in Mexico, penetrating every part of the country. These concessions embrace valuable franchises and subventions, the total amount of the latter being about $90,000,000. In so far as can be ascertained, the instalments due upon the completion of portions of the lines now under construction are promptly paid.

The granting of these privileges and subsidies appears to voice the dominant public sentiment in Mexico regarding future commercial intercourse with the United States.

The fact, also, that men of marked ability and large experience as projectors and constructors of railroads have already pushed their enterprises into Mexico affords the strongest presumptive evidence at the present time, both as to the capabilities of the country for commercial enterprise and as to the kindly disposition of the national and state governments of Mexico and of the people of that country toward the people of the United States. The building of these railroads also gives the assurance of commercial faith on the part of their projectors in the permanency of the line of policy now pursued by the Mexican Government and in its ability to carry that policy into effect. The able and far-sighted men who have embarked in the construction of railroads in Mexico have not done so without first carefully surveying the whole field and satisfying themselves upon all material points affecting the probable success of their several enterprises.

Mr. Thomas Nickerson, of Boston, president of the Mexican Central Railroad, in a recent communication to this office, states that about $30,000,000 of American capital have been invested in railroads in Mexico during the last two years. He adds:

> I believe that the resources of Mexico are very large, and that railroads will tend to develop them, perhaps not so rapidly as in a population of Americans, but that they will be developed largely I am very confident.

Already about 1,800 miles of railroad have been constructed in Mexico by citizens of the United States, the average cost of which has been about $25,000 per mile. About two-thirds of this total amount has been furnished by the American projectors.

It is believed that the foregoing statements clearly indicate that adequate securities for life and property exist in Mexico, that the immediate prospect of advancing American commercial enterprises in that country is highly encouraging, that the main inspiring cause of revolutions has been removed by the establishment of civil and religious liberty, and that in the future political disturbances are less likely to occur than during any previous period since the destruction of the Spanish power in the year 1821.

RAILROADS OF MEXICO.

Prior to the year 1870 there were several charters granted by the Mexican Government for projected railroads extending from the Rio Grande River into Mexico. The routes of these proposed lines crossed the Rio Grande River at points where it was intended that they should connect with lines to be constructed in the State of Texas. But the work of construction was never begun on any of these lines. The charters of the proposed roads lapsed and were finally declared to be forfeited.

Evidently the time had not come for the successful prosecution of such undertakings. It was necessary that the work of political reform in Mexico should first be fully accomplished, and that the new *régime* should hold power long enough in order to give assurance of the permanent establishment by the Government of that country of the principles of civil and religious liberty. Peace was finally established in Mexico by the election of General Diaz as President in 1877. This fully inaugurated the new departure in the political and commercial history of Mexico. The successful extension of railroads from the United States into Mexico also waited upon the completion of the Southern Pacific Railroad, and the Galveston, Harrisburgh and San Antonio Railroad, the Atchison, Topeka and Santa Fé Railroad, and of lines since constructed in Texas which extend to the Rio Grande.

A list of the various charters and concessions which have been granted by Mexico to railroad companies since the year 1866 may be found in Appendix No. 21. It is deemed sufficient here to describe the various lines designed to form international highways of communication, and also those railroads which have been completed or are in course of construction in the interior and in the southern part of Mexico.

(*a*.) THE SONORA RAILWAY.

The Sonora Railway extends from Benson, a point on the Southern Pacific Railroad, to Guaymas, Mexico, a point on the Gulf of California. The total length of the line is 350.19 miles. Mr. William B. Strong, of Boston, is president of this road. The corporate name of the portion of this line in Arizona, extending from Benson to Nogales, on the border, is the New Mexico and Arizona Railroad, and the corporate name of the portion of the line in Mexico, from Nogales to Guaymas, is the Sonora Railway, but for convenience in operating the road the entire line is known as the Sonora Railway, and constitutes the Sonora branch of the Atchison, Topeka and Santa Fé Railroad. The Sonora Railway, in connection with the Atchison, Topeka and Santa Fé, the Southern Pacific Railroad, and the eastern connections of the former, forms a transcontinental line between all parts of the country east of Arizona to the Pacific Ocean.

The Mexican portion of the Sonora Railway was chartered September 14, 1880, with the privilege of constructing a branch to Alamos, in the State of Sonora. The total mileage constructed in Mexico is 262.41 miles.

The Sonora Railway has a subsidy of $7,000 per kilometer—about $11,265, Mexican currency, per mile from the Mexican Government, the total amount of subsidy being about $2,950,000, Mexican currency. The portion of the line from Guaymas to Nogales was begun in May, 1880, and the road was opened for traffic October 25, 1882. The road is of the standard, or 4 feet 8½-inch gauge.

It is stated upon apparently reliable authority that the Alamos branch of this line will reach extensive anthracite and bituminous coal mines in the State of Sonora.

It is the intention of the managers of the Sonora Railway to establish a line of steamers which shall ply between Guaymas and ports along the western coast of Mexico south of that point. It is too soon yet to make any definite statement as to the probable maritime commerce of Guaymas.

(*b*) THE MEXICAN CENTRAL RAILWAY.

The Mexican Central Railway Company received a charter from the Mexican Government September 8, 1880, for the construction of its main line from Paso del Norte to the City of Mexico, with a branch line to the Pacific Ocean, and several charters at different dates covering a branch line to the Gulf of Mexico. All the lines of this company are of the standard, or 4 feet 8½-inch gauge.

The main line of the Mexican Central Railway extends from Paso del Norte, opposite El Paso, Tex., to the City of Mexico, a distance of 1,214 miles. The work of construction on this railroad is being prosecuted from both ends, and has proceeded farther than on any other projected railroad in Mexico.

The following statement in regard to the points which the lines of this road touch has been furnished by an officer of the company:

The lines of the Mexican Central connect the capital of the Republic and the eight largest State capitals, namely:

	Population.		Population.
Aguascalientes	31,872	Mexico	241,110
Chihuahua	12,116	Queretaro	34,383
Durango	28,538	San Luis Potosi	34,300
Guanajuato	100,000	Zacatecas	30,113
Guadalajara	96,335		
			608,76

The lines follow pretty closely the great highways upon which have grown up cities and towns, and pass through many of great size and importance in addition to the capitals already named, such as—

	Population.		Population.
Tula	5,834	Silao	32,738
San Juan del Rio	21,400	Leon	100,000
Celaya	28,336	Lagos	42,317
Salamanaca	23,996	Fresnillo	28,600
Irapuato	27,700	Las Nieves	10,969
San Juan del Rio (in Durango)	7,800	Tepic	24,778
Jimenez	6,000	Tampico	11,682
Santa Rosalia	6,000	Jalisco	3,912
La Barca	22,890	San Blas	3,518
Ocotlan	17,378	Paso del Norte	6,000
Tequila	6,814	Cuantitlan	4,803
Ahualulco	10,634	Huehuetoca	3,585
Etzatlan	8,255		
			465,939

The total population of the States through which the lines pass is 5,673,531, and the agricultural products, exclusive of cattle, for the year 1879, according to official figures lately published, were in weight, 3,842,982 tons, and in value, $89,100,976.

The average annual amounts of gold and silver coined for five years, at the mints situated directly upon the company's line, are as follows:

City of Mexico	$4,351,440
Guanajuato	4,687,796
Guadalajara	1,302,610
San Luis Potosi	2,168,713
Zacatecas	4,950,706
Durango	813,943
Chihuahua	856,911
Total	19,132,119

On the 31st of December, 1883, there had been completed 1,061 miles of road, leaving a gap of only 153 miles between the two ends. It is expected that the entire line will be completed and open for traffic about April 1, 1884.

The eastern branch of this railroad extends from Tampico, on the Gulf of Mexico, through San Luis Potosi to Aguascalientes, a distance of 380 miles, and the western branch from San Blas, on the Pacific coast, to a point on the main line not yet determined, a distance of about 396 miles.

On the Gulf branch 70 miles of track had been laid on the 13th of November, 1883, and 25 miles of road graded in addition, and on the Pacific coast branch about 20 miles of grading have been completed.

Mr. Thomas Nickerson, of Boston, the president of the Mexican Central Railroad, in a communication addressed to this office, under date of November 13, 1883, stated that the gross commercial earnings on the northern end of the main line during the preceding twelve months had, on an average mileage of 225 miles, been $22,500 per month, and that the gross commercial earnings of the southern end, an average mileage of 300 miles, had been $134,500 per month. These earnings had fully met the expectations of the company.

Under the terms of its charter the Mexican Central Railroad Company is to receive from the Mexican Government a subsidy of $15,200 per mile on all but a small part of its line; the total amount of its subventions will be about $30,000,000. This is payable in certificates receivable at the custom-houses for 6 per cent. of all duties paid; and after September 16, 1884, for 8 per cent. All importers are compelled to make payment of duties in accordance with this provision. The certificates are being turned into cash at the rate of about $1,100,000 per annum. Up to December 10, 1883, the cash receipts were $2,066,677.07. The average cost of the line will be from $25,000 to $28,000 per mile.

Attention is invited to the statement presented by Mr. Thomas Nickerson, president of the Mexican Central Railway Company, in Appendix No. 1.

(*c*) THE MEXICAN INTERNATIONAL RAILROAD.

The Mexican International Railroad, of which Mr. C. P. Huntington is president, extends from Piedras Negras, on the Rio Grande, opposite Eagle Pass, Tex., southwestwardly towards the interior of Mexico, and has been completed for a distance of about 150 miles.

An iron railroad bridge has been constructed over the Rio Grande between Eagle Pass and Piedras Negras, and is the first permanent structure of the kind connecting the United States with Mexico. A branch, 34 miles in length, of the Galveston, Harrisburgh and San Antonio Railroad in Texas, connects Eagle Pass with the main line of the latter road at a point 134 miles west of San Antonio.

It is stated by an officer of the company that the Mexican International Railroad is being constructed without any subvention from the Mexican Government; that the road is being laid with steel rails, and that the location of the entire line has not yet been determined, but that it will probably intersect the line of the Mexican Central Railroad within the distance of 400 miles from the Rio Grande, opening up a direct line of communication with the City of Mexico, both railroads being of the standard, or 4 feet 8½-inch gauge. The Mexican International will then form a constituent part of about 3,000 miles of railroad in Mexico.

The line will probably be opened for traffic by February 1, 1884, to Mouclova, a point in Mexico 150 miles from the Rio Grande.

Important deposits of coal of good quality have been discovered on the line of this railroad, and it is believed that the mineral and agricultural resources of the country through which it passes will supply to it a profitable traffic.

The gradients on this line are exceptionally favorable, being in no case over 1 per cent., or 52.8 feet to the mile. At the crossing of the Rio Grande the elevation above the sea is 720 feet; at Monclova, about 2,000 feet; near Parras, say, 4,000 feet, and at Lerdo, near the crossing of the Mexican Central, about 3,750 feet.

The length of the iron bridge constructed over the Rio Grande at Eagle Pass is stated to be 930 feet, exclusive of approaches.

One of the most marked advantages enjoyed by this line with respect to international traffic is that it connects with the Galveston, Harrisburgh and San Antonio Railroad, the only direct line to New Orleans, with the financial interests of which railroad the management of the Mexican International Railroad is closely related.

(*d*) THE LINE OF THE MEXICAN NATIONAL CONSTRUCTION COMPANY.

The concession of the Mexican National Construction Company, as finally modified, provides for a main trunk line from the city of Mexico to the northern frontier at Laredo; also for a trunk line from the city of Mexico to the Pacific coast at Manzanillo. The line extending from Manzanillo connects with the main line extending from Mexico to Lared at Acambaro. The company have also received concessions for the following branch lines, namely: From Zacatecas to San Luis Potosi; from Zacatecas to Aguas Calientes; from Matamoros to Monterey, and from the City of Mexico, via El Salto, to Maravatio; also three or four other short branches to points of minor importance. The franchises of the company embrace about 2,000 miles of road in Mexico, all of which will be of the 3-foot gauge. General W. J. Palmer is president of this company.

The line of the Mexican National Construction Company will connect with that of the Mexican Central Railway Company at Zacatecas. On the 22d of December, 1883, the company had constructed in Mexico 416 miles of road at the southern end, including branches, and 282 miles at the northern end. Its total completed mileage at that time embraced 880 miles of road, of which 698 miles were in Mexico and 182 miles in the State of Texas. Besides, there had been constructed 28½ miles of the branch line east from Manzanillo.

The total distance from Laredo to the City of Mexico, by this line, is 855 miles. After crossing the Rio Grande, the high table-lands are reached near Saltillo, about 200 miles from Laredo. The remaining portions of the main line are located entirely upon the elevated plateaus.

At the time referred to the work of construction was being pushed forward at each end of the main line and on the two branch lines.

The following are the principal towns and cities on or near the main lines of the Mexican National Railroad, with their respective population: Mexico, 300,000; San Luis Potosi, 45,000; Pueblo, 75,000; Leon, 150,000; Silao, 38,000; Guanajuato, 63,400; Guadalajara, 80,000; Toluca, 42,000; Colima, 31,700; Zapotlan, 22,000; Zacatecas, 46,000; Morelia, 35,000; Monterey, 35,000.

Under the terms of its charter the Mexican National Railway is to receive from the Mexican Government a subsidy of $11,350 per mile on about 1,900 miles of railroad; the total amount of subventions will be about $21,565,000.

The line of the road passes through a country of great agricultural and mineral resources. Coal, the most important element of commerce and industry in Mexico, is found in the vicinity of the Rio Grande River.

Attention is invited to a letter addressed to the chief of this Bureau by Mr. W. W. Nevin, secretary of the Mexican National Construction Company, which communication, together with an interesting statement prepared by the same gentlemen in regard to the wheat fields of Mexico, may be found in Appendix No. 2.

(*e*) THE MEXICAN SOUTHERN RAILROAD.

On the 14th day of May, 1883, the Government of Mexico entered into a contract with the Mexican Oriental, Interoceanic and International Railroad Company, represented by Mr. Jay Gould, and the Mexican Southern Railroad Company, represented by General U. S. Grant, whereby the concessions previously granted to those two companies were consolidated, under the denomination of the Mexican Southern Railroad Company, of which General U. S. Grant is now president.

This road will be of the standard, or 4 feet 8½ inch grade.

The Mexican Southern Railroad Company is authorized to construct a railroad from Laredo, on the Rio Grande, via Guerrero, Mier, China, Ciudad Victoria, and Tomasunchale, to the City of Mexico, and thence, via Irolo, Pueblo, Tehuacan, and Oaxaca, to the port of Tehuantepec on the Pacific coast.

The length of the two divisions of the main line and the total length of the road are as follows:

	Miles.
Northern division, Laredo to Mexico	682
Southern division, Mexico to Tehuantepec	523
Total length of main line	1,205

The company is empowered to construct a branch line to San Luis Potosi, to extend its southern division to the border line which separates Mexico from Guatemala, and to construct various other lines as branches which are mentioned in its charter. It is also required to construct a branch to its southern division extending to Anton Lizardo, and Vera Cruz on the coast of the Gulf of Mexico.

The company by the terms of its charter is required to construct 250 kilometers (155.34 miles) of its main line during the first two years, and 200 kilometers (124.27 miles) during each successive two years. It is to receive from the Mexican National Government a subvention of $8,000 per kilometer ($12,875 per mile) of road built on its northern division, and $7,000 per kilometer ($11,266 per mile) of road built on its southern division.

It is stated by Mr. J. H. Work, secretary of the company, that the construction of the road is being carried on in accordance with the requirements of the concession, and that 100 miles of the line have already been graded.

From Laredo to the Panuco River, a distance of about 500 miles, the line is located near the base of the Sierra Madre range and upon the low lands, the climate and productions of which are tropical. Here are found forests of dye woods and caoutchouc or rubber trees; vanilla, cochineal, indigo, sugar, cotton, spices, tobacco, and a great variety of tropical fruits are also produced along this portion of the line.

Leaving the Panuco River an elevation of 4,000 feet is overcome within the distance of 25 miles by an ascent of about 160 feet to the mile. The Vera Cruz Railroad has, however, steeper gradients. It overcomes an ascent of 5,000 feet in 23 miles, an average gradient of 218 feet to the mile. After reaching the table-lands, the line of the Mexican Southern passes by low gradients and easy curvatures to the City of Mexico.

The southern division, extending from that city to Tehuantepec, passes through a populous country exhibiting a great variety of agricultural and forestry products, which variety is due largely to altitudes varying from the sea level to an elevation of 2,462 meters (7,067 feet).

The precious metals abound in many localities along the line of this road, and iron and coal are also found on both its divisions. The coal mines of the State of Tamaulipas at the north and of Pueblo at the south will probably supply a large local traffic which will stimulate the commercial and industrial development of the whole country.

The most important feature of the Mexican Southern Railroad in so far as relates to international traffic, appears to be the fact that at Laredo it connects with the "Southwest System of Railroads" in the United States, with which lines its financial interests are somewhat closely related.

Attention is invited to a statement presented by Mr. J. H. Work, secretary of the Mexican Southern Railroad, including also a copy of the charter of the company and a description of its lines. (See Appendix No. 3.)

THE AMERICAN AND MEXICAN PACIFIC RAILWAY.

The American and Mexican Pacific Railway, the present corporate name of which is the "Texas, Topolobampo and Pacific Railroad and Telegraph Company," is perhaps the most prominent of the projected railroad enterprises of Mexico, upon which the work of construction has not yet begun.

The Hon. William Windom, ex-Secretary of the Treasury of the United States, and formerly a Senator of the United States, is president of this company. The Mexican Government on the 13th of June, 1881, and on the 5th of December, 1882, granted to the Texas, Topolobampo, and Pacific Railroad Company the right to construct a railroad from Topolobampo, on the Gulf of California, to Piedras Negras, opposite Eagle Pass, or Presidio del Rio Grande on the Rio Grande, with a branch from the main line, east of the Cordilleras in a northeasterly direction to Presidio del Norte, on the Rio Grande.

The length of the main line is about 750 miles, and of the branch line mentioned about 230 miles.

The company is also granted the right to construct a line from Alamos, in Sonora, to which point the Sonora Railway is projected, to Mazatlan, a city on the Pacific Coast, of about 10,000 inhabitants, and second only to Vera Cruz in commercial importance. This line traverses the State of Sinaloa from north to south, and is 350 miles in length. The population of Sinaloa is about 170,000. It has very large and important agricultural, mineral, forest, and pastoral resources, the development of which waits upon the facilities of railroad transportation.

The harbor of Topolobampo on the Gulf of California, at the western end of the main line, is said to be one of the finest on the globe.

The right of way of this company on all its lines as granted by the Government is 70 meters (227½ feet) in width, or 35 meters on each side of its track.

The main line of the road passes for 200 miles through a forest of pine timber, and extensive tracts of hard-wood timber and dye woods. These resources are expected to supply a large traffic to the road. A branch line, 100 miles in length, will reach extensive and valuable mines of both anthracite and bituminous coal in the State of Sonora. Under the terms of its charter, the company is authorized to construct branch lines from its main line and from its branches before mentioned, including the line from Alamos, in Sonora, to Mazatlan, but none of such branch lines are to be over 100 miles in length. The Mexican National Government also contracts to pay to this company a subvention of $8,064 per mile upon its main line, Pacific coast lines, and all branches.

The total amount of subsidy agreed to be paid by the Mexican Government to this company will, upon the completion of all its lines, amount to about $15,000,000.

It is provided that all merchandise in transit from the United States, through Mexico over the American and Mexican Pacific Railway, shall be allowed to pass free of all customs charges and port dues.

The company have made reconnaissances and surveys of about 2,000 miles of their several lines, and have located somewhat more than 100 miles of the line east from Topolobampo Bay.

Attention is invited to a statement in regard to the line of the American and Mexican Pacific Railway, which may be found in Appendix No. 4.

OTHER RAILROADS IN MEXICO.

(*a.*) A concession has been granted for the construction of a line known as the Tamaulipas International Railway, extending from Matamoros along the Gulf coast, and touching at Tampico and Tuxpan. From the latter point this line is to connect with a projected line to the City of Mexico. This office has not been able to obtain any more specific information in regard to this route.

(*b.*) Several railroad concessions, granted at different times, have been consolidated into one concession under the name of the Acapulco, Morellos, Mexico, Irolo and Vera Cruz Railroad. This projected line extends from Acapulco, on the Pacific coast, to Vera Cruz, on the Gulf of Mexico, and passes through the other cities just mentioned.

(*c.*) The Tehuantepec Inter-Ocean Railway was projected and in part constructed by a New York company, which had received a concession for its construction. About a year ago the charter of this company was declared to be forfeited. The work is now being prosecuted by the Mexican Government, and about one-third of the line has been constructed.

(*d.*) The Mexican Railway, extending from Vera Cruz to the City of Mexico, was completed in January, 1873, by a British company. This line is 263¼ miles in length.

(*e.*) The Tehuantepec Ship Railway was projected by Capt. James B. Eads, a citizen of the United States. The Mexican Government has granted it the right of way and liberal privileges. The surveys for this undertaking have been made. It will be seen by the accompanying hypsometric map that the topographical features of the isthmus of Tehuantepec are peculiarly favorable to the construction of a transportation line connecting the Gulf of Mexico with the Pacific Ocean.

GENERAL REMARKS UPON THE PROBABLE TRAFFIC OF RAILROADS NOW IN COURSE OF CONSTRUCTION IN MEXICO.

The several railroad lines extending from the United States into and through Mexico will, as hereinbefore shown, pass through large towns and cities, and in almost every State subserve the commercial interests of populous and settled communities. Although the agricultural products of Mexico are exceedingly diversified, the people of the country can now exchange such products only upon the payment of transportation charges, which greatly restrain internal commerce, and which, with respect to a large part of the country, constitute an insuperable barrier to foreign trade. Wheat of the finest quality is, as already shown, produced in a considerable portion of the country, but the great cost of transporting it causes its price to be so high in other localities as to place it beyond the means of the laboring classes. It is said that in the district known as El Bajio the price of wheat is about the same as that of barley, but in the City of Mexico, only 150 miles distant, a bushel of wheat costs as much as eight of barley. In some parts of the country it is difficult to procure wood for fuel in cooking, and in other places firewood is so abundant that it has no market value. In certain localities the most valuable woods—ebony, rosewood, mahogany, and cedar are used for fuel for the reason that it is impracticable to transport them to the seaboard. These, and other facts hereinbefore presented, appear clearly to indicate that the local traffic of the railroads of Mexico will be much larger and more profitable even than their through traffic between the two countries which they will connect. The Union Pacific and the Central Pacific Railroads were projected chiefly upon expectations based upon through traffic, but during the last year local tonnage and receipts from local traffic of those railroads were considerably in excess of the tonnage and the receipts from through traffic. The fact that the railroads of Mexico will subserve the commercial interests of a country of 12,000,000 inhabitants, alone renders it highly probable that they will, from the time of their completion, secure a large and profitable local traffic.

CONCLUDING REMARKS.

The line of policy adopted by the Mexican Government since the restoration of the Republic, of aiding and promoting the construction of railroads designed to connect that country with the United States, and the persistency with which that policy has ever since been pursued, commends Mexico to the favorable consideration of the more advanced nations of the globe. As already shown, large and liberal franchises have been granted to the American projectors of such railroads, with subventions to the amount of $90,000,000, conditioned upon the completion of the proposed lines. Mexico entered upon this great undertaking, not upon the basis of her ability at the time of its conception to carry it into effect, but by faith in the resources of the country, and in the possibilities of railroad transportation so to increase the national revenues and to quicken the productive energies of the country as to enable her to accomplish her high purpose and resolve.

This policy is not the mere expedient of a faction, or the expression of the will of a party in power. It voices the prevailing sentiment of all classes from Paso del Norte to Tehuantepec, and from the Gulf of Mexico to the Pacific Ocean.

The Mexican people everywhere believe that the establishment of direct intercourse with the United States by means of railroads will tend to advance the value of property, to quicken commercial and industrial enterprise, to enhance the wages of labor, to give employment to the unemployed, to establish peace and order, and generally to promote the material interests of their country.

Results already realized point to the wisdom of this policy and predicate its success. Property has already greatly enhanced in value along the portions of the lines which have been completed, the wages of labor have increased, and the awakening influence of the new agency of social and commercial life is felt by people of all classes and conditions. Among the enterprising young men of the country the desire to acquire a knowledge of the English language is quite general. Mexico already sees the coming fruition of her hopes, and seeks more intimate commercial relations with the United States.

The objects had in view by the government of Mexico in the adoption and prosecution of its railroad policy have been both commercial and political. The advantages of a railroad system extending to all parts of a country of vast territorial proportions, with a population of 12,000,000, in the administration of the police powers of the Government, in the protection of life and property, and in the prevention and speedy suppression of violent outbreaks, are clearly apparent.

It is, of course, impossible very accurately to forecast fully the commercial results which will be realized in Mexico from the completion of the railroads now in course of construction, which are designed to connect the United States with that country; but that a great change is at hand is obvious, from the fact that Mexico will, within the space of two or three years, pass from conditions which gave character and direction to commerce and industry three hundred years ago, to conditions which give character and direction to commerce and industry in the more advanced nations at the present day. The transformation will probably be one of the most marked within the records of history.

In every country in which railroads have been introduced there has been a general awakening of intellectual activity and of enterprise. The progress made in commerce and in all the arts of material prosperity after such facilities for transportation have been provided, has been greater in decades than in preceding centuries. Perhaps the results of railroad construction in the States and Territories comprising the area acquired by the United States from Mexico may serve to aid in forming some conception of the results to be expected from the extension of railroads in Mexico. This area embraces in whole or in part the States of California, Nevada, Colorado, and Texas, and the Territories of Arizona, Utah, Wyoming, and New Mexico. The railroad mileage of the States and Territories referred to, increased from 679 miles in 1860 to 10,082 miles in 1880, and, as the result mainly of the construction of railroads the aggregate population of those States and Territories increased from 1,159,132 in 1860 to 3,037,739 in 1880. At the time of the cession of the area embracing those States and Territories, its entire population was less than 400,000. But, as already stated, Mexico has a population estimated at about 12,000,000, composed of people who, in their accustomed ways, have for centuries been addicted to industrial pursuits.

It is true that the people of Mexico differ widely from the people of the United States in their manners, institutions, and laws, in their habits and tastes, and in their inherited prejudices. But the new conditions of social and commercial life which will be introduced by means of the railroad, and the evident desire and ambition of the Mexican people to place themselves in accord with the more advanced nations, will tend constantly and rapidly to draw them into unity of purpose with the people of the United States.

A growing knowledge in each country of the business methods of the other will also draw them together in a larger and more beneficial commercial intercourse. Already Mexico feels the awakening influence of her new departure in promoting the construction of international railroads. This is indicated by the following facts. About two-thirds of the foreign commerce of Mexico is with the United States and Great Britain. The growth of her trade with these two countries has been as follows:

Statement showing the growth of the commerce of the United States and Great Britain with Mexico.

Fiscal year ended June 30—	United States.		Great Britain.	
	Imports from Mexico.	Exports to Mexico.	Imports from Mexico.	Exports to Mexico.
1877	$5, 204, 264	$5, 893, 494	$3, 887, 638	$5, 215, 501
1878	5, 251, 502	7, 460, 704	2, 467, 715	4, 184, 937
1879	5, 493, 221	6, 752, 244	2, 835, 997	3, 724, 133
1880	7, 209, 593	7, 866, 493	3, 056, 508	6, 244, 109
1881	8, 317, 802	11, 171, 238	2, 878, 218	8, 202, 247
1882	8, 461, 899	15, 482, 582	2, 818, 531	9, 526, 252
1883	8, 177, 123	16, 587, 620	....	....

The above table indicates an increase of about 123 per cent. in the commerce of Mexico with the United States and an increase of 35.6 per cent. in her commerce with Great Britain from 1877 to 1882. The influence of the railroads is more directly shown by the fact that the value of exports to the United States at Laredo, on the Rio Grande, the point of crossing of the Mexican National Railway, increased from $271,916 in 1877 to $1,219,933 in 1882; at Paso del Norte, the northern terminus of the Mexican Central Railway, from $80,994 to $881,019, and at Nogales, the point at which the Sonora Railroad crosses the boundary line, from $5,768 to $143,211.*

The increase of the national revenues of Mexico is also a sign of the awakening of enterprise. This is shown in the following table:

	Total revenue.	Customs.
1878–'79 *	$17, 811, 125	$12, 733, 824
1879–'80 †	21, 936, 165	13, 438, 284
1880–'81 ‡	22, 142, 039	
1881–'82 §	25, 725, 000	
1882–'83 ‖	34, 000, 000	
1883–'84 ¶	36, 000, 000	

* Pedro de Olive.
† Annales de Fomento, tomo v.
‡ President's message, September 16, 1881.
§ Official estimate (Whitaker.)
‖ Mr. Romero, minister of Mexico to the United States.
¶ In his last annual message President Gonzales stated that the revenue from customs for the year ended June 30, 1883, amounted to $18,500,000, an increase of $5,062,000 since the year ended June 30, 1880, and he estimated the total revenues for the year 1883–'84 at about $36,000,000.

From this it appears that the revenues of Mexico have more than doubled during the last five years.

It is of course impossible to predict with any degree of precision the results of the completion of the railroads now in course of construction in Mexico upon the commercial and industrial and transportation interests of the United States. The situation of these lines and their relations to railroads in this country seem, however, to indicate that the cities of Saint Louis and of New Orleans will become the chief centers of trade with Mexico. The Southern Pacific and Galveston, Harrisburgh and San Antonio line connecting with all the Mexican lines has for its chief eastern terminus the city of New Orleans, while the great southwestern system or Missouri Pacific organization and the Atchison, Topeka, and Santa Fé, together, connect with all the Mexican lines and have for their most important eastern terminus the city of Saint Louis. The apparent commercial conditions are highly favorable to the upbuilding of an important trade with the neighboring republic, at both those cities. Other cities in this country will also compete for the same trade.

California, Nevada, and Oregon will also participate in the commercial advantages which will flow from the establishment of direct communication with Mexico through the facilities of railroad transportation.

A table has been prepared showing the railroad distance and time from New Orleans, Saint Louis, Chicago, San Francisco, and Washington respectively to the City of Mexico for passenger trains and for freight trains. (See Appendix No. 24.)

This statement will probably be of some interest, although it is not, of course, assumed that the data therein presented is in the nature of an accurate prediction of future train movements.

The diversities of the traffic interest of the railroads now in course of construction in Mexico as well as of their connections in the United States appear to be favorable to the development of an active competition which will regulate rates and prevent commerce from being burdened by excessive rates. Each one of those lines will also feel the restraining and regulating influences of the competition of rival commercial forces, both in this country and in Mexico.

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* From the Mexican Financier of October 27, 1883.

The extension of railroads from the United States into Mexico, and the completion of the Canadian Pacific Railway with its branches, will in the course of two or three years place almost every habitable part of North America within the reach of commercial enterprise. In view of what has been accomplished in railroad construction in the Dominion of Canada, in the United States, and in Mexico, during the last five years, the prediction appears to be no longer a dream of the enthusiast that within the lifetime of men now actively engaged in business pursuits, direct railroad communication will be established between the United States and all the countries of Central and South America.

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APPENDICES.

APPENDIX No. 1.

Statement furnished by Mr. Thomas Nickerson, president of the Mexican Central Railway Company, in regard to the present condition of that railroad and its traffic operations.

MEXICAN CENTRAL RAILWAY COMPANY, LIMITED.

BOSTON, *November* 13, 1883.

DEAR SIR: Your favor of the 10th instant is at hand. The main line of this company's road runs from Paso del Norte (opposite El Paso, Tex.) to the City of Mexico, a distance of 1,214 miles. We are constructing from both ends, and at present the two ends are about 275 miles apart. We expect now to make the connection about March 15, 1884. We have no branch in contemplation from our line to Laredo.

The line from Laredo south is being constructed by the Mexican National Construction Company, New York City. We have a concession for a line from our main line to the Pacific coast and to the Gulf of Mexico. We have already commenced work and have some grading done from San Blas eastward, but have laid no rails as yet except in the yard. The point of junction of the Pacific branch and the main line is not yet determined, but it will probably be in the vicinity of Irapuato, a distance of about 396 miles.

The Tampico branch runs from Tampico, on the Gulf of Mexico, and passes through San Luis Potosi, joining the main line at Aguascalientes; distance, about 380 miles. We have completed 70 miles of track from Tampico westward, and about 25 miles of grading.

As to traffic: The gross earnings on the Southern Division from commercial business alone, on an average mileage of about 300 miles, for the last twelve months, has averaged $134,500 per month. On the Northern Division, on an average mileage of 225 miles, the gross commercial earnings have averaged $22,500 per month.

We are now making efforts to establish a stage line between the two ends of our main line, which we hope to do by January 1, in which case we shall open the road for through passengers.

Those who know the country well believe that when the main line is opened and through business added to our present local traffic, the earnings of the company will be satisfactory to the stockholders.

Yours, truly,

THOS. NICKERSON,
President.

JOSEPH NIMMO, Esq.,
Chief of Bureau of Statistics, Washington, D. C.

[The following additional statement in regard to commodities transported on the Southern Division of the Mexican Central Railway was forwarded to this office by Mr. Levi C. Wade, second vice-president, under date of December 6, 1883:]

We receive from—

Tula.—Lead, grain, lime, charcoal, eggs, chickens, saddle-trees, common kitchen ware, mustard.

San Anto, Tula.—Charcoal and lime in large quantities.

San Juan del Rio.—Wheat, corn, beans, butter, eggs, and cheese.

Ahorcado.—Wheat and corn in large quantities.

Queretaro.—Wheat, corn, and beans, in very large quantities; bricks and fruit.

Celaya.—Sweetmeats, corn, beans, sugar-cane.

Salamanaca.—Great leather manufacturing place. Gloves, boots, trousers, shoes, and suits. Water and muskmelons, grain, and country produce.

Irapuato.—Grain, considerable seeds, rags, cheese, hay in large quantities, beans wheat, lard.

Silao.—Hats and grain.

Guanajuato.—Building stone and minerals.

Leon.—Cheese, eggs, fruit, hides, beans, grain in general.

Lagos.—Grains, wool, salt, meats, red pepper in large quantities, butter, and cheese.

We ship groceries, machinery, hardware, dry-goods, sugar, coffee, cocoa, wagons and carts, silks, oils, clocks, agricultural and mining machinery, quicksilver for mining, dynamite and powder.

APPENDIX NO. 2.

Statement furnished by Mr. W. W. Nevin, secretary of the Mexican National Construction Company, in regard to the lines of that company in Mexico, and the subject of wheat culture in Mexico.

THE MEXICAN NATIONAL CONSTRUCTION COMPANY,
47 *William street, New York, November* 23, 1883.

DEAR SIR: In reply to your favor of 16th instant, I have the honor to make the following brief statement:

The franchises of the Mexican National Construction Company in Mexico cover about 2,000 miles of road. A telegraph line is appurtenant to each railway line. This system has to be completed within ten years from January 11, 1883, that is, by January 11, 1893. We have already completed, as by table annexed, nearly 900 miles, 700 of which are in Mexico. I may state here that we have charters or leases for several hundred miles of railway in Texas to round out our system and control our own way to the Gulf ports. The mileage already built puts us considerably in advance of our concessionary stipulations as to time.

I inclose herewith a reduced map, prepared to show the general system and the situation of its construction to date. The heavy black lines, solid, indicate completed trunk line, the heavy black lines dotted indicate uncompleted trunk line, the small black lines indicate branches.

Our line crosses the Mexican Central line now at Celaya. Our branch line from Zacatecas to San Luis Potosi will, when completed, also connect the two systems.

The map inclosed shows, in a general way, the location of some of the coffee districts. I have not yet prepared any data which would enable me to give the probable area of the sugar and coffee lands of Mexico. I inclose, however, copy of a hurried monograph prepared by myself some months ago for a special purpose, on the wheat fields of Mexico, which I think will afford partially the information you want on one of the leading products of the country.

Very respectfully, yours,

W. W. NEVIN.

JOSEPH NIMMO, Jr., Esq.,
Chief of Bureau of Statistics,
Treasury Department, Washington, D. C.

Mileage of the Mexican National Railway constructed to date.

MEXICAN NATIONAL CONSTRUCTION COMPANY,
New York, December 22, 1883.

TOTAL MILEAGE.

			Miles.
Northern General Division:			
Corpus Christi to Laredo	160.8		
Branch to Fort McIntosh	5.21		
Mexico Junction to center of Rio Grande	1.25		
Galveston Division	15		
		182.26	
Laredo to Saltillo		235.4	
Matamoros Division		46.69	
			464.3

			Miles.
Southern General Division:			
City of Mexico to Morelia	234.88		
Acambaro to San Miguel	76.58		
		311.46	
El Salto Division:			
City of Mexico to El Salto	41.80		
Naucalpan to Las Cuartos	7.47		
Junction to Stone Quarry	2.17		
		51.44	
Cintura Railroad	3.16		
Irolo Railroad	2.55		
Zacatecas Division	18.94		
At Pacific end:			
Manzanillo to Armeria	28.57		
		53.22	
Total General Southern Division			416.12
Grand total finished			880.47

THE WHEAT FIELDS OF MEXICO.

Within living memory, Lancaster County, Pennsylvania, was the banner wheat county of the land. The center of the wheat-raising area has since moved westward with rapidity, successively through Ohio, Illinois, and the Kansas-Iowa district. The last decade has seen the tremendous development of California as a grain-growing State, and the magic rise of the Northern Pacific wheat fields.

Another vast grain field, large enough to affect the supply and consumption of the world, and to enter into serious competition with the United States and Russia—the two leading wheat-exporting countries of the world—now looms into sight. It is Mexico, and it comes to the front as part of the great commercial and industrial reconstruction of that land by the American railways.

The physical formation of Mexico is simply an extension southward of the great Colorado mountain base plateau. Wheat grows on the plateau of Mexico at from 6,000 to 9,000 feet above sea-level, and between the 18th and 24th parallels of latitude. Corn grows everywhere, except on certain waste districts along the northern frontier, where the soil is the same as the alkali plains of Arizona and New Mexico. The wheat-growing area of Mexico, par excellence, extends from, say, Puebla nearly to Colima, about 500 miles east and west, and from Southern Michoacan to Zacatecas, about 400 miles north and south. This plateau is broken by mountain ranges into a number of rich districts specially adapted for the growing of wheat, namely, the Lerma Valley, roughly, 200 by 16 miles; the Bajio (Northern Michoacan, Jalisco and Southern Guanajuato), 200 by 200 miles; Aguascalientes, 50 by 50 miles; the San Luis Potosi and Queretaro district, 150 by 30 miles. Total, say, 52,000 square miles. Of this immense field of rich and arable land one-third, it is believed, could be readily put into wheat with due regard to the other agricultural interests of the country.

Under the Mexican plan of cultivation three crops are taken off the land every two years—one crop of wheat and two crops of corn. The average wheat yield of Mexico now does not exceed 20 bushels to the acre. Corn on irrigated lands runs about 50, on dry land about 30 bushels to the acre. The mode of cultivation is similar to that of the Egyptians thousands of years ago. Wooden beam plows are used, with a small iron shoe, which scratches a furrow 5 inches broad by 5 deep. Five men are used and five yoke of oxen where one would be needed in Pennsylvania. Nevertheless the wheat raised is of the very finest quality.

At the Centennial Exposition, Philadelphia, 1876, Mexico led the world in wheat, taking the first prize.

Thrashing is done by driving mares around over a circular tile or stone floor, winnowing by men tossing the grain and chaff into the air with scoop shovels, and transportation from the field to the farm house or railway station is on ponderous two-wheeled ox-carts, in which the ox pulls about 3 pounds of cart to 1 pound of load.

Apart from the 52,000 square miles spoken of above, which is the choice wheat-producing area, there is sufficient outlying wheat, barley, and corn land now under actual cultivation to supply the present population of Mexico, 10,000,000. These people are at present fed on grain raised just where they live, there having been up to this time no organized machinery for transportation of products from one part of the country to the other. Mexico is substantially a corn-fed nation, seven-eighths or more of the people living habitually on *tortillas*.

Were this wheat area cultivated to its full capacity, namely 17,333⅓ square miles, or one-third of 52,000 square miles, it would yield, under present conditions, 20 bushels of wheat and 40 bushels of corn per acre, as follows:

	Bushels.
First year, wheat crop	221, 866, 660
First year, corn crop	433, 733, 320
Second year, corn crop	443, 733, 320

Or, say, an average of 110,000,000 bushels of wheat and 440,000,000 bushels of corn every year.

And this immense yield is all available for a foreign market, as the outlying lands will always raise enough for the home consumption of Mexico, as they do now. This special wheat area we are talking about is less that one-fourteenth of the total area of Mexico.

But under the modern conditions of agriculture, with improved machinery and systematic feeding of the soil, this yield would be much greater.

By the end of 1884 Mexico will probably enjoy a reasonably thorough railway system, viz, two trunk lines from the capital to the United States, having also good branch lines to the Gulf ports of Vera Cruz, Tampico, Matamoros, and Corpus Christi. The land of Mexico is largely held in huge estates, often like those of the great land-owners of England. The Bustamente estate, for instance, extends over portions of three States, and the line of the National Railway runs through it for 50 miles. These vast estates, with the fact that in the central part of Mexico, at least, they are of cleared land, will enable the wheat-growing area to be put rapidly under cultivation when once the railways open up a market for wheat.

Further, $6 to $10 a month is now rather high pay in Mexico for agricultural labor. Wages will be raised some, of course, under the stimulus of the new industrial era, but common labor in Mexico will for a long time remain very cheap, as compared with the United States. The Mexican wheat-grower therefore enters the market of the world under peculiarly favorable conditions. He owns his own land in large tracts; he works it with the cheapest labor, and he frequently is a man of large funded capital. He is also, nearly everywhere in his country, nearer the seaboard than are the wheat growers of the United States.

It may be further added that the above figures are very conservative. Some writers and engineers, who have carefully studied Mexico, extend the area of this central wheat belt very largely, and place the rate of production per acre higher.

The Mexican wheat raiser, however, is seriously handicapped in one respect, *i. e.*, by the vicious system of State taxes which prevails all over the Republic. Some States tax the production of wheat, others the importation of it into or through their borders. This tax is uncertain, varies with every State, and is burdensome. Men who have lived long in Mexico, and are well acquainted with the country, allege that it is well nigh impossible to codify or keep track of these State imposts, which are laid without system or any broad knowledge of political economy. They compute, however, that they can be roughly estimated at about 1 per cent. on the value of nearly everything raised or brought into the State. This is one of the things which keeps Mexico so poor, relatively to her large population and immense resources.

I desire to make my acknowledgments for the data of this paper to Mr. Maurice Kingsley, C. E., now in the engineering service of the United States Government, Mr. William Pritchard and Mr. James Sullivan, of the City of Mexico.

W. W. NEVIN.

APPENDIX No. 3.

Statement presented by Mr. J. H. Work, secretary of the Mexican Southern Railroad, in regard to that enterprise, inclosing also a copy of the charter of the company, and a description of its lines.

MEXICAN SOUTHERN RAILROAD COMPANY,
(UNITED BANK BUILDING),
New York, December 18, 1883.

DEAR SIR: Replying to your favor of the 11th instant, I beg leave to inclose you herewith:

1. A map showing the main line of the Mexican Southern Railroad (in red ink); the branch lines have not yet been surveyed and are therefore omitted.
2. A copy of our Mexican concession.
3. A full description of the line.

"In addition would say that at Laredo the line connects with what is known as th LSouthwest system of railways," and that construction is being carried on south of aredo, in accordance with the requirements of our concession.

Very truly, yours,

J. H. WORK,
Secretary.

JOSEPH NIMMO, JR., Esq.,
Chief of Bureau of Statistics, Washington, D. C.

DESCRIPTION OF THE LINES OF THE MEXICAN SOUTHERN RAILROAD COMPANY.

The line of the Mexican Southern Railroad, which connects with, and forms a part of, what is known as the "Southwest system" of railroads, begins at New Laredo, Mexico, runs along the Rio Grande through a valley well adapted for farming and stock raising, and not subject to overflows. Following southeasterly the course of the river it touches the city of Guerrero, a distance of 40 miles, at which point it strikes the first coal ledge; thence to the city of Mier, a distance of 30 miles, at which point it turns due south towards China, 130 miles from Laredo.

From China the line continues in a southerly direction until it reaches Ciudad Victoria, the capital of the State of Tamaulipas, 275 miles from Laredo. The line between these two points is almost a bee-line, and passes through a country of almost unlimited agricultural resources and a denser population than that of all the border States of Mexico combined. The line for this whole distance skirts the eastern base of the Sierra Madre Mountains, the eastern slope of which abounds in minerals, and as soon as transportation is offered the development of these mines will be extensive.

For the next 100 miles the line follows the drainage of the Tamesi River, the whole region abounding in fine timber until it reaches Tancasnique, about 100 miles northwest of Tampico. Tancasnique is the head of navigation of the Tamesi and is accessible to tugs and barges all the year around.

Crossing the Tamesi near Tancasnique over a 200-foot truss-bridge (the only one of importance up to this point) the line runs south for about 40 miles where it crosses the Panuco River, about 10 miles above its junction with the Montezuma River and 400 miles from Laredo. Between the Tamesi and Panuco Rivers the line crosses the Mexican Central Railroad about 60 miles west of Tampico. The Panuco is navigable to our crossing for about eight months in the year. The country is tropical in its character, the soil is of the richest description, and the streams abound with the choicest fish. The hill sides are covered with the finest dye-woods; and caoutchouc or rubber trees, the clearings producing two crops yearly with scarcely any labor. Large beds of iron and chapopote (Grahamite) are crossed on this division. Most of the vanilla, cochineal, indigo, sugar, cotton, spices, tobacco, broom-corn, and an endless variety of fruit of tropical America grow here.

With the exception of the bridge across the Tamesi and the Panuco Rivers, the whole line presents no engineering difficulties for the first 500 miles, until it reaches Tamasunchale where the ascent to the table lands begins. Maximum grades for the first 300 miles never exceed 1 per cent., and for the following 200 miles not over 1½ per cent. There are no curves of less than 1,450 feet, and not a single tunnel.

From Tamasunchale the road enters the State of Hidalgo and runs south towards the divide of the Montezuma and Quetzalapa Rivers, which it crosses near Zimapan, passing through one of the most important mineral regions of the Republic. Thence it follows the Tula River (a feeder of the Montezuma), touching the villages of Ixmiquilpan and Mixquihuala, until it reaches the city of Zumpango, 135 miles southwest of Tamasunchale, and 635 miles from Laredo.

For about 25 miles south of Tamasunchale there is a rise of nearly 4,000 feet to be overcome, or about 160 feet to the mile. This is the only serious trouble along the whole line, but it compares most favorably with any other line approaching the valley of Mexico. The Vera Cruz road, for instance, having to ascend 5,000 feet in 23 miles, which is a grade of 218 feet to the mile. A few curves of about 600 feet will be needed on this portion of the line; the bridging will be comparatively easy, and the tunneling short.

The rest of the line, 30 miles, from Zumpango to the City of Mexico, runs through the table lands of the valley and presents no difficulty of construction whatever. The Valley of Mexico is highly cultivated and productive of immense crops of every description. The climate, with its regular rotation of rainy and dry seasons, makes a crop failure an impossibility. Total length by this line, 665 miles.

There has been another line carefully surveyed which, after crossing the Panuco River, runs southeasterly via Zacualtipan and Tulancingo, and which, although 17 miles longer, is easier to build. It passes through a belt of over 40 miles of very fine pine timber, and has, besides, the best prospect for coal that is known between the Panuco River and Mexico City. This in itself would make this location preferable, since the line would pass near by Pachuca, which needs fuel very badly. The Tulancingo Valley is also much the best, from an agricultural point of view, in the whole State of Hidalgo. And finally, this route would be better adapted for the building of the various gulf branches, making them shorter on account of its more easterly location. Total length, 682 miles.

For the reasons stated this longer line has been taken as a basis for the inclosed estimates which were carefully computed by Chief Engineer B. S. Wathen, from actual surveys of over 350 miles, and preliminary surveys of over 300 miles of road.

The southern division of the Mexican Southern Railroad begins at the City of Mexico (elevation above the Gulf, 2,270 meters), and for the first 45 miles runs parallel to the Mexican Railroad (Vera Cruz road). The country is almost level, thickly populated, and in a high state of cultivation. The transportation of "pulque," the national beverage of Mexico, will prove one of the principal sources of revenue on this portion of the road.

Passing Irolo, 2,462 meters above the Gulf, 45 miles from Mexico, the line runs through a part of the State of Tlazcala and the beautiful valley of San Martin Texmelucan, 2,303 meters above the Gulf, reaching Puebla, 2,154 meters above the Gulf, the capital of the State of Puebla (66 miles from Irolo), after traversing districts whose population and agricultural development is second to none in the Republic. The superior climate of Puebla and its never-failing water-power, which it owes to the stream descending the Guadalupe hills, make this city one of the foremost manufacturing centers of Mexico. In its immediate vicinity are several sulphurous springs of volcanic origin, whose remedial qualities in skin diseases, scrofulous and rheumatic affections, are widely known. Population of the city of Puebla, 100,000.

Leaving Puebla the line passes through a section famous for its marbles, tecali (Mexican onyx), and limestone of superior quality. Some of the most important coal deposits are also found on this section. After a run of 71 miles, Tehuacan, 1,645 meters above the Gulf, the commercial center of the surrounding Mixtecas is reached, whence the road follows the valley of the Rio Salado, passing through rich alluvial deposits, teeming with subtropical vegetation and boasting numerous very productive sugar plantations, until it reaches Arenal, 556 meters above the Gulf, a distance of 55 miles from Tehuacan.

The whole line from the City of Mexico down to this point is entirely free from any engineering difficulty. Tunneling and bridging is insignificant. Maximum grades, 75 feet to the mile; minimum radius of curves, 750 feet.

From Arenal the line follows a southerly direction along the Rio Cuicatlan, which it leaves near a village of the same name, 650 meters above the Gulf, and runs up the river Tomellin, an affluent of the former, ascending until it reaches the divide of the Cordilleras at Sedas, 1,780 meters above the Gulf, which at this point are pierced by a tunnel about 1 mile long. Some twelve to fifteen small bridges, not exceeding 40 feet in length, will be needed on this section. The country is well wooded, the soil a light conglomerate, with quartz in some portion and gold-bearing gravel in the river beds, where ten mines are being worked now. To cross the Rio Cuicatlan a bridge about 180 feet long will be needed. The divide at Sedas is by 700 feet lower than any other that can be found in this section. Distance from Arenal to Sedas, 64 miles.

The descent from Sedas to the city of Oaxaca is made through gentle sloping valleys, presenting no engineering difficulties whatsoever, and producing, side by side with sugar-cane, cotton, coffee, and cochineal, every known variety of cereals. The productiveness of the soil is largely due to a perfect system of irrigation and a climate unsurpassed in its uniform mildness. The city of Oaxaca, 1,541 meters above the Gulf, has a population of 30,000, and is situated in the center of three great valleys, averaging 6 miles in width, and containing over 150,000 industrious and frugal tillers of the soil. Distance from the tunnel of Sedas via Oaxaca to Amatlan, 87 miles.

At this latter point, Amatlan, 1,471 meters above the Gulf, the line enters a rich mineral district, producing copper, silver, and gold in large and paying quantities, and needing only capital and transportation facilities to make it one of the most important mineral regions of the country. Following the affluents of the Rio Tehuantepec for about 45 miles, the line reaches Tequisistlan, 158 meters above the Gulf, a small town 70 miles distance from Amatlan.

From Tequisistlan the line descends easily through the valley of Tehuantepec (13,000 inhabitants) to the city of the same name (8,000 inhabitants), 40 meters above the Gulf, passing through an extremely fertile and well-watered country abounding in precious woods, game, and agricultural products of every conceivable variety. Distance from Tequisistlan to the city of Tehuantepec, 65 miles. Total length of southern division, 523 miles.

RECAPITULATION.

	Miles.
Northern Division, Laredo to Mexico	682
Southern Division, Mexico to Tehuantepec	523
Total length of the Mexican Southern Railroad	1,205

CONCESSIONS GRANTED TO THE MEXICAN SOUTHERN RAILROAD COMPANY.

DEPARTMENT OF STATE AND OF PUBLIC WORKS, COLONIZATION, INDUSTRY, AND COMMERCE OF THE MEXICAN REPUBLIC.

The President of the Republic has seen fit to direct to me the following decree:

Manuel Gonzalez, constitutional President of the Mexican United States, to those to whom these presents may come, know ye:

That by virtue of the power which the law of December 4, 1882, gives to the executive, I have seen fit to approve the following

CONTRACT

Celebrated between Manuel Fernandez, chief clerk of the department of public works, in representation of the executive of the Union, and Messrs. Jay Gould and Ulysses S. Grant, in representation of the Mexican, Oriental, Interoceanic and International, and the Mexican Southern Railroad Companies, for the consolidation of the concessions granted to both companies into a single concession under the denomination of the "Mexican Southern Railroad Company."

ARTICLE I.

The concession of June 7, 1881, as amended November 15, 1881, and the concession of May 26, 1881, as amended January 11, 1882, relating to lines of railroad from the Rio Grande to the City of Victoria and the City of Mexico, and to the line of railroad from the City of Mexico by way of Puebla to the frontier of Guatemala, which concessions were given to Messrs. Francis De Gress, in representation of the International Railway Improvement Company, and Ulysses S. Grant, in representation of the Mexican Southern Railroad Company, are hereby consolidated into one single concession, whose lines shall in future be governed by the concession of June 7, 1881, with such modifications, however, of articles 1, 4, 8, 19, and 39 of the latter concession as shall hereinafter appear. The concession of May 26, 1881, hereby ceases to exist.

I. Article first shall read as follows:

ARTICLE 1. A. Authority is given to the Mexican Southern Railroad Company to construct and operate, during ninety-nine years from the date of this grant, a railway line, with its corresponding telegraph and telephone line, which, commencing at a point on the Rio Grande between Laredo and Reynosa, continues south, between the meridians of longitude 1 west and 2 east of the meridian of Mexico, touching at Mier or Camargo, and thence to Ciudad Victoria, and from this point between the already mentioned meridians to be continued to the City of Mexico by the most convenient ascent to the table lands.

The main line may divide or branch off, before its ascent to the table lands, passing by Papantla and Mizantle, with its terminus in Vera Cruz, with branch roads to Linares, Soto la Marina, Tampico, Tuxpan, and Tecolutla at Nautla. A branch road may be extended from Ciudad Victoria via Tula to San Luis Potosi.

The company may also construct a branch to the bar of Jesus Maria in case this last port should be opened to the coasting and foreign trade.

B. Authority is also given to the Mexican Southern Railroad Company to construct and operate a railroad line, with its corresponding telegraph and telephone line, from the City of Mexico to the frontier of Mexico with Guatemala, passing through the city of Puebla and touching with the main line, or by means of a branch line, the city of Oaxaca, as also the ports of Vera Cruz and Anton Lizardo, on the Gulf of Mexico, and those of the States of Oaxaca and Chiapas, on the Pacific Ocean, which the company may consider convenient to touch at with the approval of the department of public works.

The construction of the road shall be commenced at the ports of Anton Lizardo and Vera Cruz; but the company may also construct from the ports on the Pacific at which the line may touch, or from the points in the interior of the country which it may deem convenient. The branch line from Anton Lizardo to Vera Cruz shall be completed within two years from the date of this contract.

The company shall, besides, have the right to construct, if it so suits its interests, the following branches:

I. A branch line for the purpose of connecting with the Vera Cruz line between Irolo and Puebla, and another branch line connecting with the Morelos Railroad in Cuantle Morelos.

II. A branch line, which, starting from Tonala or from some convenient point of the trunk line, may reach the cities of Tuztla, Chiapa, San Cristobal, and Comitan, in the State of Chiapas.

III. If the company should construct its trunk line from this capital to Oaxaca, through Peubla, Acatlan, and the route called "La Mixteca," it may also construct another line or part thereof, through Tehuacan and the route called "La Canada;"

and if the company should build its main line through Puebla, Tehuacan, and the route of "La Canada," it may build another line, or part thereof, through Acatlan and "La Mixteca."

IV. The branch lines which it may deem convenient from one to the other side of its lines, provided they are approved by the department of public works, and that each one of the said branch lines do not exceed 160 kilometers.

At the end of the ninety-nine years of this grant, the line will pass, in good condition and free of debt, to the control of the Republic; but the Government shall purchase all the stations, warehouses, workshops, rolling stock, tools, furniture, and fixtures which the company may have for the use and operation of the road, and shall pay in cash the value of said stations, storehouses, workshops, rolling stock, tools, furniture, and fixtures fixed by two experts, one named by each party, and a third previously appointed by those two to act in case of discord.

If the Government thereafter wishes to rent or sell the line the company will be entitled to preference.

II. Article 4 shall read as follows:

ARTICLE 4. The construction of the line from the Rio Grande to the City of Mexico, shall be commenced sixty days from the date of this contract, and the works once commenced must be prosecuted without interruption the company being obliged under penalty of forfeiting the concession to construct at least 250 kilometers of railroad during the first two years, and 200 kilometers at least during every successive two years.

Of the lines and branches specified in section B of article 1, the company is obliged to construct 100 kilometers at least during the first two years, and 200 kilometers at least during every successive two years. The total amount of lines specified in sections A and B of article 1, and such branches as the company may definitively adopt, must be completed within twelve years from the date of this contract.

The Mexican Southern Railroad Company is authorized to transfer all of its rights, concessions, or portions thereof, with its corresponding obligations, to one or more companies which may be organized for that purpose with the previous consent of the executive.

As a guarantee of the fulfillment of its obligations, the company to whom such transfer is made, shall make a deposit in a manner satisfactory to the federal treasury of the sum of $25,000 to $50,000, as the Secretary of the department of public works may determine, which amount the company shall lose in case of forfeiture.

IV. Article 19 shall read as follows:

ARTICLE 19TH. To aid the construction of the lines of railroad and telegraph to which this contract refers, the Government binds itself to give to the company a subsidy of $8,000 for each kilometer of the road constructed and approved by the department of public works, according to the terms of this law, but the lines specified in section B of article 1, shall be entitled to $7,000 per kilometer only.

This subsidy shall commence to be paid after the completion of the first 75 kilometers and successively for each section of 25 kilometers, in accordance with the terms of article 20 of the concession of June7, 1881.

V. Article 39 shall read as follows:

ARTICLE 39. In case of forfeiture on account of non-compliance with the obligations imposed in article 4 of this contract, the concessions made to this company may thereupon be declared null, void, and of no effect, by the Federal Government, in so far as it applies to the portion of the line or lines mentioned in this contract which may be incomplete at the time of such failure to comply with said obligations, remaining, however, in full force as to all portions of the line or lines completed previous thereto in compliance with the terms of the said concessions, the company reserving its right to be paid by the Government the amount of subsidies which the Government may owe it for whatever number of kilometers may have been constructed.

In case of such forfeiture the Government of the Republic may acquire possession of the constructed portions of the line or lines, subject to the first mortgage obligations of the company then outstanding, which shall not exceed $15,000 per kilometer of constructed road, with 6 per cent. annual interest added; the Government, after deducting the subsidies, paying the company the full value of the property thus acquired over and beyond said first mortgage bonds, such value of the line and its appurtenances, equipment, stations, &c., to be fixed by two experts appointed, one by each party, and who shall, before commencing to act, name a third to decide in case of disagreement.

ARTICLE 2.

The provisions with relation to the character and the construction of the railroad lines of said company and its appurtenances, and the examination and acceptance thereof by the Government, shall be the following:

I. The said company shall submit to the Government of the Republic of Mexico its standard plans showing the proposed character of the structures of said railroad, such as bridges, tunnels, culverts, depots, station-houses, and other "works of art," and these plans shall be approved by the department of public works before the beginning of the construction thereof by said company; and all sections of the road, when completed and presented by the company to the Government for approval and acceptance, shall be in accordance with these accepted standard plans; and no subsidy shall be due to or claimed by the company upon any section of the road unless it conforms to the standards herein referred to; the company being at liberty, however, to add to the number of the works or to the expense of the construction of the same, if found expedient.

II. For the purposes of the inspection and examination called for by this article, the Government shall have the right to appoint for each line an engineer, who shall receive a salary, to be fixed by the Executive and paid by the company, not to exceed $4,000 per annum, and whose duty shall be the examination of every completed section, in accordance with the provisions of this article, and the inspection of the maps and profiles whenever required by the department of public works.

III. Upon completing the examination of its lines, the company shall file with the department of public works preliminary maps showing its surveys and containing all the data obtained in regard to the country; and the company shall also submit for approval by the said department its final plans and profiles, as provided by the existing railroad regulations. Such final plans and profiles once approved, the company shall not be allowed to alter its location, as therein represented, without previous consent of the said department, to which end the company shall submit plans and profiles showing the modifications desired.

Article 3.

All the times mentioned in the present concession are understood to have been modified and shall be computed from the date of this contract.

Article 4.

The company hereby accepts all the rights and obligations stipulated in the colonization contract celebrated January 11, 1882, between the department of public works and the Mexican Southern Railroad Company.

Article 5.

The Mexican Southern Railroad Company shall remain subject, in regard to all its rights and obligations, to the conditions of the concession of June 7, 1881, with the modifications and additions herein established.

Article 6.

The coal tariff shall be one and one-half cents per ton per kilometer, and the Government shall be entitled to a reduction of one-third of the same when destined for public service, in which case the rules laid down in article 47 shall be observed, and the department of public works give its respective orders.

Mexico, 14th of May, 1883.

CARLOS PACHECO.

By power of attorney for the parties in interest:

RAMON FERNANDEZ.

Wherefore I command that it be printed, published, circulated, and duly complied with.

Given at the palace of the Executive power of the Union, 14th of May, 1883.

MANUEL GONZALEZ.

To Carlos Pacheco,
Secretary of State and of the Department of
Public Works, Colonization, Industry, and Commerce.

And I communicate it to you for your information.
Liberty in the constitution.
Mexico, 14th of May, 1883.

PACHECO.

APPENDIX NO. 4.

Statement in regard to the American and Mexican Pacific Railway, by Col. A. K. Owen, Chief Engineer.

The American and Mexican Pacific Railroad passes through a range of climates from that of the semi-tropical to that of the middle temperate zone. There are four distinct sections. The first section is 100 miles wide. It extends from Topolobampo Harbor to the foot-hills of the Sierra Madre, and will produce every fruit, root, vegetable, cereal, shrub, tree, and plant known to Cuba, California, and Florida. The elevation of this section is from tide water to 1,000 feet. The mean temperature is about 75°. The transition from day to night, from one day to another, and from season to season, is gradual—not sudden like it is in the northeastern region of the United States. The mean variation of the year is about 14°. The climate is oceanic. There are two seasons only, wet and dry. The rains are expected in June and last till October. They come in showers every third or fifth day. From November till May there are occasional rainy days. The annual fall of rain varies from 23 to 60 inches. During the wet season west-southwest winds blow. The northwest winds prevail in the dry season. In September and October, when the southwest wind changes toward northeast and northwest, a hurricane, more or less violent, rages. In unprotected places persons living in frame houses might suffer during these storms, but persons dwelling in stone or adobe houses would not be inconvenienced. The natives eat, sleep, and sit in the open air. Protected from the vertical rays of the sun, no day in the year is found to be oppressive. Sunstrokes are not known. A house with a fire-place is not met with. The laborers are mostly Mayo Indians. The ruling classes are Mexicans. Industries are not diversified, hence the people are poor, and local supplies are uncertain.

The second section extends from the western foot-hills of the Sierra Madre, 200 miles, to the plateau of Chihuahua. The elevation is from 1,000 to 8,000 feet. This is markedly a mineral, metal, and timber belt. The minerals and metals embrace almost every variety known to commerce—petroleum, quicksilver, onyx, and coal being among the recent developments. The silver deposits of this region, remarkably those of Batopilas and La Culebra, are metals and not ores; *i. e.*, they can be treated mechanically, chemical means not being necessary for their reduction. They bear the same relation to silver deposits which the copper metals of Lake Superior bear to copper deposits, and, per consequence, can be easily and economically handled. The timber is of the best classes of pine, oak, cedar, larch, and the hard woods peculiar to Mexico.

As a sanitarium and district for scenic entertainment and adventure this section has, perhaps, no equal. Boiling and mineral springs, rivers of crystal water, cascades, giant cañons, and quaint and grotesque formations in sandstones and porphyries are to be met at every turn. Here the ravines and valleys are often 4,000 feet, and, in instances, 7,000 feet below their immediate ridges.

The climate of these valleys is that of South Italy. The climate of their overhanging ridges is that of the pine-clad hills of North Pennsylvania. The climate of the Mesas and intermediate slopes is that of South France.

In the valleys grow the palmetto, date, and other palms. There one finds the fig, pomegranate, lime, lemon, orange, grape, pecan, zopote, mamay, chirimoya, banana, pineapple, quince, aguacate, sugar-cane, water-melon, cantaleup, coffee, and roses. On the slopes and mesas, or table-lands, which rise immediately from the bottom lands of the rivers, one finds nutritious and abundant grasses, and some apples, peaches, apricots, potatoes, aloes, and a soil and temperature which guarantees, with cultivation, the production of berries, coffees, grapes, almonds, and other nuts. This section is as well watered as the State of Pennsylvania; and the rain-fall is more than it is in the first section. The miners are Mexicans and Americans. The fruit-growers are Tamare Indians— a peaceable, industrious, independent, picturesque race, and peculiar for the tenacity with which they keep to their native dress, language, and ways.

The third section extends from the eastern slopes of the Sierra Madre 300 miles across the plateau of Chihuahua and the Bolson de Mapimi, to the western foot-hills of the Santa Rosa Mountains. This is distinctly a cerial and pastoral zone. Surface water is scarce; but good water is found at depths of from 30 to 50 feet. Artesian currents are probable from 400 to 700 feet. In the middle region of this section occur the great iron mountain of Ialco and the celebrated silver mines of the Sierra Mojada. The elevation of the plateau of Chihuahua is from 5,000 to 6,000 feet; that of the Bolson de Mapimi is from 4,000 to 5,000 feet. The climate is similar to that of the coast sections of South California—elevation overcoming latitude. The temperature is from 63° to 82°. The soil and climate in this section combined with population and industry would make this a garden region. In the United States three-quarters of the people live on grounds below 500 feet elevation. In Mexico the populations leave the low lands and reside on the high; and this section is destined to become a favored and a populous one. At present it is but sparsely settled. The Bolson de Mapimi until recently was overrun with the Kickapoo and Comanche Indians, but they were collected together and removed to Oaxaca.

The fourth section extends from the eastern edge of the Bolson de Mapimi, about 100 miles, through the passes of the Santa Rosa Mountains and across the valley to the Rio Grande. Its elevations range from 1,400 to 4,000 feet. Its products are those of the second and third sections. The coals of this section are anthracite, bituminous, and cannel; and they are in sufficient quantities and qualities to meet all present requirements for manufacturing and locomotion. This section was called by the old Spaniards *New Manila*, because it reminded them of the climate of the Phillipine Islands.

Supplemental statement presented by Col. A. K. Owen, chief engineer of the American-Mexican Pacific Railroad Company.

Since writing the foregoing statement, I have received a letter from Hon. Wm. K. Rogers, attorney for the company, stating the results of a careful reconnaissance of the harbor of Topolobampo and its approaches. Mr. Rogers fully confirms all that has before been said as to the capaciousness, depth of water, safe anchorage, and natural beauty of the harbor. He also describes in strong terms the beauty of the contiguous lands and shores which constitute the site of the city of Gonzalez and their great extent. He states that including the shores of the various "esteros" or arms of the harbor, it has a water frontage, available for wharfage, of more than 60 miles. In the opinion of Mr. Rogers the harbor of Topolobampo will become the finest seaport in the world, and the most convenient for commercial purposes.

Mr. Rogers describes the climate of Topolobampo as being unsurpassed by that of any other locality on the globe.

I have also received a report from Capt. N. Ohlson, of the schooner Laura, giving the following facts in regard to the Topolobampo bar:

"1st. In the middle entrance you have 3½ fathoms of water.

"2d. At the north entrance, 5 fathoms.

"3d. On the south entrance you have 4 fathoms of water; all the above measurements are at low-water.

"The bar is something like 500 feet long.

"After leaving the bar on the inside or inside of the channel of the harbor it deepens to 12 fathoms the moment you get over the bar and can throw the lead.

"You have 6 fathoms up to point of landing in the channel.

"You will require three buoys on the bar so that any vessel will be safe at any time with a pilot."

These channels agree in position and depth with those laid down in the chart made by Commander Wm. T. Truxton, U. S. N., in 1869.

A. K. OWEN.

APPENDIX NO. 5.

Letter addressed to the Chief of the Bureau of Statistics by the Chief Signal Officer of th United States Army, in regard to the climate of Mexico, and especially in regard to the effects of altitude upon its climate.

WAR DEPARTMENT, OFFICE OF THE CHIEF SIGNAL OFFICER,
Washington, D. C., November 30, 1883.

SIR: In compliance with your request of the 15th instant, I have the honor to inclose herewith two charts containing the winter and summer isotherms of Mexico. In this connection I would state that reports from the stations of observation in Mexico are not as satisfactory as could be desired, frequent omissions being found. The isothermal lines are drawn as accurately as possible with the data at hand.

The question of equivalent latitude change needed to find a climate like that of Mexico can only have an arbitrary reply, *e. g.*:

1. Mexico's annual temperature is like that of Naples, but the summer temperature is like that of Southern Germany.

2. Mexico's annual temperature is about 60°.6 F. at an altitude of 7,000 feet. By

going directly north, over the Gulf of Mexico to the United States, we find the same annual temperature at latitude 35° north, or at a distance of 15°.5 in latitude, and a fall of 6,500 feet, whence 7°.2 of latitude correspond to 3,000 feet.

3. By going northeast along the plateau, and following that up, we come to latitude 30° on the Pacific coast, or a change of 5°.8 for 3,000 feet.

4. By comparing mean annual temperature at Mexico, altitude 7,000 feet, temperature 60°.6, and Vera Cruz, on the coast, temperature 77°.6, we find 3,000 feet make a change of 7°.4 F., which is equivalent to 6° latitude on the Florida coast, but is equivalent to very nearly 10° latitude on the parallel of Mexico, if we take an average of the whole as given by Ferrell's Table V, Meteorological Research, No. 1. For 6,000 feet the equivalent will be about double the figures given.

I am, very respectfully, your obedient servant,

W. B. HAZEN,
Brig. and Bvt. Maj. General, Chief Signal Officer, U. S. A.

Mr. JOSEPH NIMMO, Jr.,
Bureau of Statistics, Treasury Department, Washington, D. C.

Mean temperature at Mexican stations having an elevation of over 3,000 feet.

	Elevation.	June, 1877.	July, 1877.	August, 1877.	Summer.
	Feet.				
Toluca	8, 612	......	61. 3	60. 6	......
Morelia	6, 365	......	......	......	......
Querétaro	6, 070	......	74. 3	74. 7	......
Guanajuato	6, 762	......	69. 8	69. 4	......
Guadalajara	5, 091	......	72. 5	70. 3	......
Zacatecas	8, 189	......	63. 3	64. 4	......
Orizaba	4, 026	......	71. 1	70. 2	......
Jalapa	4, 590	......	69. 8		......
Oaxaca	5, 072	......	72. 5	73. 0	......
Mexico	7, 513	......	63. 7	62. 2	......

	Elevation.	December, 1877.	January, 1878.	February, 1878.	Winter.	Elevation.	June, 1878.	July, 1878.	August, 1878.	Summer.
	Feet.					*Feet.*				
Mexico	7, 513	54. 3	55. 0	57. 7	55. 7	7, 513	67. 3	64. 0	62. 4	64. 6
Morelia	6, 365	55. 8	57. 2	58. 8	57. 3	6, 365	70. 2	66. 2	65. 7	67. 4
Querétaro	6, 070	58. 5	59. 0	61. 3	59. 6	6, 070	75. 2	70. 5	67. 8	71. 2
Guadalajara	5, 091	59. 9	59. 7	60. 3	60. 0	5, 091	71. 8	66. 6	66. 4	68. 3
Silao	6, 850	58. 6	59. 0	62. 1	59. 9	6, 850	......	......	......	......
Pabellon	6, 312	54. 3	56. 1	60. 3	56. 9	6, 312	75. 2	69. 8	67. 6	70. 9
Zacatecas	8, 189	49. 6	53. 4	54. 7	52. 6	8, 189	71. 1	66. 0	65. 8	67. 6
Cuernavaca	4, 954	......	66. 7	68. 9	......	4, 954	74. 8	70. 5	68. 7	71. 3
Orizaba	4, 026	59. 7	58. 8	64. 6	61. 0	4, 026	74. 1	......	71. 2	......
Oaxaca	5, 072	61. 9	63. 7	65. 5	63. 7	5, 072	72. 3	71. 6	70. 2	71. 4
Puebla	7, 070	53. 1	53. 6	55. 4	54. 0	7, 070	68. 4	64. 6	62. 4	65. 1
Leon	5, 935	57. 4	59. 5	56. 5	57. 8	5, 935	74. 1	70. 0	68. 4	70. 8

	Elevation.	December, 1878.	January, 1879.	February, 1879.	Winter.	Elevation.	June, 1879.	July, 1879.	August, 1879.	Summer.
	Feet.					*Feet.*				
Mexico	7, 513	54. 9	55. 6	56. 3	55. 6	7, 513	63. 7	63. 4	62. 2	63. 1
Morelia	6, 365	56. 3	59. 9	61. 9	59. 4	6, 365	......	65. 3	64. 8	......
Querétaro	6, 070	59. 0	59. 4	63. 0	60. 5	6, 070	......	71. 2	70. 3	......
Guadalajara	5, 091	59. 5	59. 2	60. 6	59. 8	5, 091	......	......	......	......
Silao	6. 850	......	......	......	......	6, 850	......	......	......	......
Pabellon	6, 312	56. 8	59. 0	60. 3	58. 7	6, 312	69. 8	70. 5	67. 6	69. 3
Zacatecas	8, 189	53. 2	58. 1	60. 3	57. 2	8, 189	63. 7	65. 3	61. 5	63. 5
Cuernavaca	4, 954	......	......	......	......	4, 954	......	......	......	......
Orizaba	4, 026	......	60. 1	62. 2	......	4, 026	68. 2	68. 0	68. 9	68. 4
Oaxaca	5, 072	60. 8	62. 1	63. 1	62. 0	5, 072	69. 3	67. 6	68. 9	68. 6
Puebla	7, 070	54. 5	54. 5	54. 3	54. 4	7, 070	63. 9	63. 3	63. 1	63. 4
Leon	5, 935	59. 0	60. 4	61. 5	60. 3	5, 935	70. 0	70. 7	68. 5	69. 7

Mean temperature at Mexican stations, &c.—Continued.

	Elevation.	December, 1880.	January, 1881.	February, 1881.	Winter.	Elevation.	June, 1881.	July, 1881.	August, 1881.	Summer.
	Feet.					*Feet.*				
Guanajuato	6,762	57.2	......	......	......	6,762	70.0	66.9	67.5	68.1
Leon	5,935	58.3	......	58.8	......	5,935	72.9	69.1	70.0	70.7
Mexico	7,513	54.3	......	55.2	......	7,513	63.9	62.8	63.0	63.2
Oaxaca	5,072	62.6	......	63.1	......	5,072	70.7	68.9	69.8	69.8
Pabellon	6,312	56.5	......	56.8	......	6,312	72.1	68.9	69.3	70.1
Puebla	7,070	54.9	......	55.6	......	7,070	65.5	64.0	63.5	64.3
Zacatecas	8,189	52.0	......	51.4	......	8,189	67.3	63.7	63.9	64.9
San Luis Potosi	......	......	......	......	......	6,211	69.6	69.4	68.9	69.3

APPENDIX No. 6.

Schedule of articles to be admitted free of duty from Mexico into the United States under the terms of the proposed treaty, showing those articles which are now admitted into the United States from foreign countries free of duty, and those articles which are now dutiable, and the rate of duty thereon.

No.	Articles to be free under treaty.	Present rates of duty.
1	Animals, alive, specially imported for breeding purposes.	Free of duty.
2	Barley, not pearl	10 cents per bushel.
3	Beef	1 cent per pound.
4	Coffee	Free of duty.
5	Eggs	Do.
6	Esparto and other grasses, and pulp of, for the manufacture of paper.	Do.
7	Flowers, natural, of all kinds	10 per cent.
8	Fruits: All kinds of fresh fruits, such as lemons, oranges, pineapples, limes, bananas, plantains, mangols, &c.	Lemons: Whole boxes, of capacity not exceeding 2½ cubic feet, 30 cents per box; half boxes, of capacity not exceeding 1¼ cubic feet, 16 cents per box; packages not specially enumerated or provided for, 20 per cent.; in bulk, $2 per M; limes, 20 per cent. Oranges: Whole boxes, of capacity not exceeding 2½ cubic feet, 25 cents per box; half boxes, of capacity not exceeding 1¼ cubic feet, 13 cents per box; barrels, of capacity not exceeding that of the 196 pounds flour barrel, 55 cents per barrel; packages not specially enumerated or provided for, 20 per cent.; in bulk, $1.60 per M. Pineapples, bananas, plantains, mangols, &c., free of duty.
9	Goatskins, raw	Free of duty.
10	Hennequen, sisal, hemp, and other like substitutes for hemp.	Sisal grass, $15 per ton; hemp, unmanufactured, Russia and other, also India manila and other like substitutes for hemp, $25 per ton.
11	Hide ropes	Free of duty.
12	Hides, raw, or uncured, whether dry, salted, or pickled, and skins, except sheepskins with wool on, Angora goatskins, raw, without the wool, and asses' skin.	Do.
13	India rubber, crude, and milk of	Do.
14	Indigo	Do.
15	Ixtle or Tampico fiber	$15 per ton.
16	Jalap	Free of duty.
17	Leather, old scrap	Do.
18	Logwood, berries, nuts, archil, and vegetables for dyeing, or used for composing dyes.	Free of duty, if unmanufactured; if partially manufactured, 10 per cent.
19	Molasses	Testing by the polariscope: Not above 56°, 4 cents per gallon; above 56°, 8 cents per gallon.
20	Palm, or cocoanut oil	Free of duty.
21	Quicksilver	10 per cent.
22	Sarsaparilla, crude	Free of duty.
23	Shrimps, and other shell fish	Do.
24	Straw, unmanufactured	Do.
25	Sugar, not above No. 16, Dutch standard in color.	Dutch standard in color, not above No. 13, tank bottoms, sirups of cane, juice, or beet juice, melada, concentrated melada, concrete and concentrated molasses, testing by the polariscope: Not above 75°, 1.40 cents per pound; above 75°, for every additional degree, or fraction thereof, .04 cents per pound; above No. 13, and not above No. 16, 2¾ cents per pound.
26	Tobacco in leaf, unmanufactured	Leaf tobacco, of which 85 per cent. is of the requisite size, and of the necessary fineness of texture to be suitable for wrappers, and of which more than 100 leaves are required to weigh a pound: Not stemmed, 75 cents per pound; stemmed, $1 per pound. Leaf, all other, unmanufactured, and not stemmed, 35 cents per pound; leaf, all other, stemmed, 40 cents per pound.
27	Vegetables, fresh, of all kinds	Vegetables, edible in their natural state, or in salt, or brine, all, 10 per cent.
28	Wood and timber of all kinds, unmanufactured, including ship-timber.	Free of duty.

APPENDIX No. 7.

Schedule of articles to be admitted free of duty into Mexico from the United States under the terms of the proposed treaty, showing those articles which are now admitted into Mexico from foreign countries free of duty and those articles which are now dutiable, and the rate of duty thereon.

[The Mexican tariff rates are taken from Commercial Report of the Department of State, No. 15, June, 1882.]

No.	Articles to be free of duty.	Weight, measure, or number.	Free.	Duty on each 100 kilograms, gross.	Per cent. on invoice value.	Specific duty.
1	Accordeons and harmonicas	Kilogram.		$0 75		$0 43
2	Anvils	do		50		10
3	Asbestos for roofs, not enumerated					
4	Bars of steel for mines, round or octagonal	Kilogram.		50		
5	Barrows and hand-trucks, with one or two wheels	do		50		
6	Bricks, refractory, and all kinds of bricks*	do		50		*2 20
7	Books, printed, unbound, or bound in whole or in the greater part with paper or cloth	do		1 00		
8	Beams, small, and rafters of iron for roofs, provided that they cannot be made use of for other objects in which iron is employed	do		50		
9	Coal of all kinds	do	Free			
10	Cars and carts with springs:					
	Two wheels	Each		50		33 00
	Four wheels	do		50		66 00
	Small hand	do		50		3 00
11	Coaches and cars for railways		Free			
12	Crucibles and melting pots of all materials and sizes	Kilogram.		50		
13	Cane knives	do		50		
14	Clocks, mantle, or wall:					
	Fine	do		75		86
	Ordinary	do		50		29
15	Deligences and road carriages of all kinds and dimensions	Each		50		150 00
16	Dynamite	Kilogram.		50		
17	Fire-pumps, engines, and ordinary pumps for irrigation and other purposes	do		50		
18	Faucets	do		50		19
19	Fuse and wick for mines	do		50		
20	Feed, dry and straw	do		50		
21	Fruits. fresh	do		50		
22	Fire-wood, not enumerated					
23	Fish, fresh, not enumerated					
24	Guano	Kilogram.		50		
25	Hoes, mattocks, and their handles	do		50		
26	Houses of wood or iron, complete	do		50		
27	Hoes, common, agricultural knives without their sheaths, scythes, sickles, harrows, rakes, shovels, pick-axes, spades, and mattocks for agriculture	do		50		
28	Henequen bags, on condition that they be used for subsequent exportation with Mexican products			50	55	
29	Ice	Kilogram.		50		
30	Iron and steel made into rails for railways	do		50		
31	Instruments, scientific	do		1 00		
32	Ink, printing	do		50		
33	Iron beams	do		50		
34	Lime, hydraulic	do		50		
35	Locomotives		Free			
36	Lithographic stones	Kilogram.		50		
37	Masts and anchors for vessels, large or small			50		
38	Marble in blocks			50		
39	Marble in flags for pavements not exceeding forty centimeters in square, and polished only on one side			50		

*Fire-brick.

Schedule of articles to be admitted free of duty, &c.—Continued.

No.	Articles to be free of duty.	Weight, measure, or number.	Free.	Duty on each 100 kilograms. gross.	Per cent. on invoice values.	Specific duty.
40	Machines and apparatus of all kinds for industrial, agricultural, and mining purposes, sciences and arts, and any separate extra parts and pieces pertaining thereto (The extra or separate parts of machinery and the apparatus that may come united or separately with the machinery are included in this provision, comprehending in this the bands of leather or rubber that serve to communicate movement, but only when imported at the same time with the machinery to which they are adapted.)	Kilogram		$0 50		
41	Metals, precious, in bullion or in powder		Free			
42	Money, legal, of silver or gold, of the United States		Free			
43	Moulds and patterns of the arts			50		
44	Naphtha			80	88	
45	Oats, in grain or straw			50		
46	Oars for small vessels			50		
47	Plows and plowshares			50		
48	Paper, tarred for roofs, not enumerated					
49	Plants and seeds of any kind, not growing in the country, for cultivation			50		
50	Pens of any metal not silver or gold	Kilogram		75		$0 86
51	Petroleum, crude			80	88	
52	Petroleum or coal oil and its products for illuminating purposes	Kilogram		50		Net, 09
53	Powder, common, for mines			50		
54	Quicksilver			50		
55	Rags or cloth for the manufacture of paper			50		
56	Roof tiles of clay or other material	M		50		M., 1 65
57	Sulphur			50		
58	Stoves of iron for cooking and other purposes:					
	With ornaments of brass	Kilogram		50		29
	Without ornaments of brass	do		50		19
59	Staves and headings for barrels			50		
60	Soda, hyposulphite of			50		
61	Steam-engines			50		
62	Sewing-machines			1 00		
63	Slates for roofs and pavements			50		
64	Sausages, large or small	Kilogram		50	24	
65	Teasels of wire, mounted on bands for machinery, or vegetable teasels			50		
66	Tools and instruments of iron, brass, or wood, or composed of these materials, for artisans	Kilogram		50		19
67	Types, coats of arms, spaces, rules, vignettes, and accessories for printing of all kinds			50		
68	Vegetables, fresh			50		
69	Wire, telegraph, the destination of which will be proven at the respective custom-houses by the parties interested		Free			
70	Wire of iron or steel for carding, from No. 26 upwards			50		
71	Wire, barbed, for fences, and the hooks and nails to fasten the same	Kilogram		50		02
72	Water pipes of all classes, materials, and dimensions, not considering as comprehended among them tubes of copper or other metal that do not come closed or soldered with seam or with riveting in all their length			50		
73	Window blinds, painted or not painted	Kilogram		50		29

Appendix No. 8.

Production of Sugar.

[From "Journal de la Société de Statisque," Paris, 1880.]

BEET SUGAR PRODUCT.

Table showing the annual production of beet sugar during the last five crop years from, 1874–'75 to 1878–'79.

	Pounds.
France	953,709,960
Germany	927,431,128
Austria-Hungary	894,847,140
Russia	473,989,000
Belgium	154,145,632
Netherlands	55,115,000
Sweden, Norway, Italy	11,023,000
Total 1878–'79	3,470,260,000
Total 1877–'78	3,131,634,300
Total 1876–'77	2,471,764,451
Total 1875–'76	3,025,637,132
Total 1874–'75	2,616,948,384

CANE SUGAR PRODUCT.

[From Journal de la Societé de Statistique, Paris, 1880.]

For certain countries the export is given in the following statement, it being impossible to ascertain the production.

	Pounds.
Europe:	
Spain	33,069,000
Asia:	
French Cochin China (production)	55,115,000
China (export)	55,115,000
Japan (export)	33,069,000
Siam (export	11,023,000
Hindostan and British East Indies (export)	55,115,000
Hindostan and British East Indies (product consumed)	3,196,670,000
Total	3,406,107,000
Africa:	
Egypt (production)	66,138,000
Mauritius (export)	297,621,000
Mayotta, Nossi-Bé (export)	8,818,400
Natal (export)	17,636,800
Bourbon Island (export)	66,138,000
Madagascar (export)	7,716,100
Total	464,068,300
America:	
Antilles or West Indies:	
Cuba (production)	1,421,967,000
Porto Rico (export)	198,414,000
Jamaica (export)	44,092,000
Hayti and Lucayos (export)	11,023,000
Total	1,675,496,000

	Pounds.
Lesser Antilles:	
Guadeloupe (export)	110,230,000
Martinique (export)	88,184,000
Trinidad (export)	125,662,200
Barbadoes (export)	119,048,400
Antigua (export)	15,432,200
St. Christopher (export)	11,023,000
St. Lucia (export)	11,023,000
St. Vincent (export)	13,227,600
Others (export)	41,887,400
Total	535,717,800
Guiana:	
Demerara-Berbice (export)	209,437,000
Surinam (export)	20,943,700
Cayenne (export)	2,204,600
Total	232,585,300
Other countries:	
Brazil (export)	266,536,140
Louisiana (export)	231,483,000
Peru (export)	187,391,000
Mexico (export)	66,138,000
Canada (export)	11,023,000
California (export)	11,023,000
Argentine Republic (export)	11,023,000
Total	784,617,140
Grand total, America	3,228,416,240
Oceanica:	
Java (export)	475,091,300
Manila (export)	264,552,000
Australia (export)	44,092,000
Sandwich Islands (export)	27,557,500
Others (export)	9,920,700
Total	821,213,500
General total 1878–'79	7,952,874,040
Seasons:	
1877–'78	7,605,870,000
1876–'77	7,475,798,600
1875–'76	7,374,387,000
1874–'75	7,605,870,000

APPENDIX No. 9.

Quantities of sugar, molasses, and rice produced in the State of Louisiana during the years from 1850 *to* 1883, *inclusive.*

Year.	Sugar.		Molasses.	Rice.
	Hogsheads.	*Pounds.*	*Gallons.*	*Pounds.*
1849–'50	247, 923	269, 769, 000	12, 000, 000	....
1850–'51	211, 203	231, 194, 000	10, 500, 000	....
1851–'52	236, 547	257, 138, 000	18, 300, 000	....
1852–'53	321, 934	368, 129, 000	25, 700, 000	....
1853–'54	449, 324	495, 156, 000	31, 000, 000	....
1854–'55	346, 635	385, 227, 000	23, 113, 620	....
1855–'56	231, 427	254, 569, 000	15, 274, 140	....
1856–'57	73, 976	81, 373, 000	4, 882, 380	....
1857–'58	279, 697	307, 666, 700	19, 578, 790	....
1858–'59	362, 296	414, 796, 000	24, 887, 760	....
1859–'60	221, 840	255, 115, 750	17, 858, 100	....
1860–'61	228, 753	265, 063, 000	18, 414, 550	....
1861–'62	459, 410	528, 321, 500	(*a*)	....
1862–'63	(*a*)	(*a*)	(*a*)	....
1863–'64	76, 801	84, 500, 000	(*a*)	....
1864–'65	10, 387	10, 800, 000	(*a*)	....
1865–'66	18, 070	19, 900, 000	(*a*)	....
1866–'67	41, 000	42, 900, 000	(*a*)	....
1867–'68	37, 364	41, 400, 000	(*a*)	....
1868–'69	84, 256	95, 051, 225	5, 636, 920	....
1869–'70	87, 090	99, 452, 940	5, 724, 256	....
1870–'71	144, 881	168, 878, 592	10, 281, 419	....
1871–'72	128, 461	146, 906, 125	10, 019, 958	....
1872–'73	108, 520	125, 346, 493	8, 898, 640	....
1873–'74	89, 498	103, 241, 119	8, 203, 944	....
1874–'75	116, 867	134, 504, 691	11, 516, 828	....
1875–'76	144, 146	163, 418, 070	10, 870, 546	....
1876–'77	169, 331	190, 672, 570	12, 024, 108	....
1877–'78	127, 753	147, 101, 941	14, 237, 280	35, 080, 520
1878–'79	213, 221	239, 478, 753	13, 218, 404	36, 592, 310
1879–'80	169, 972	198, 962, 278	12, 189, 190	20, 728, 520
1880–'81	218, 314	272, 982, 899	15, 255, 029	61, 331, 340
1881–'82	122, 982	159, 874, 950	9, 691, 104	55, 422, 180
1882–'83	241, 220	303, 066, 258	15, 716, 755	43, 059, 960

a No data.

NOTE.—The production of sugar and molasses in Louisiana is stated upon the authority of M. Champoiner for the period prior to 1861, and for the later years upon the authority of M. Louis Bouchereau and A. Bouchereau.

APPENDIX No. 10.

Quantities of sugar and molasses produced in the United States during the years 1869 *and* 1879, *according to the census.*

States.	Sugar.		Molasses.	
	1869.	1879.	1869.	1879.
	Hogsheads.	*Hogsheads.*	*Gallons.*	*Gallons.*
Alabama	31	94	166, 009	795, 169
Arkansas	92	....	72, 008	....
Florida	952	1, 273	344, 339	1, 029, 868
Georgia	644	601	553, 192	1, 565, 784
Louisiana	80, 706	171, 706	4, 585, 150	11, 696, 248
Mississippi	49	18	152, 164	536, 625
Missouri	49	....	....	....
North Carolina	35	....	33, 888	....
South Carolina	1, 055	229	436, 882	138, 944
Tennessee	1, 410	....	3, 629	....
Texas	2, 020	4, 951	246, 062	810, 605
Total	87, 043	178, 872	6, 593, 323	16, 573, 273

APPENDIX No. 11.

Imports of sugar, molasses, melada, and sirup of sugar-cane, and of candy and confectionery into the United States from each foreign country during the year ended June 30, 1883.

	Countries from which imported.	Brown sugar.		Refined sugar.		Molasses.		Melada and sirup of sugar-cane.		Candy and confectionery.	
		Pounds.		*Pounds.*		*Gallons.*		*Pounds.*		*Pounds.*	
1	Argentine Republic	2, 438, 762	$89, 984	......	......	......	......	......	......	......	......
2	Austria	......	......	......	......	......	......	......	......	......	......
3	Belgium	1, 903, 234	96, 480	......	......	......	......	......	......	131	$84
4	Brazil	160, 422, 404	5, 418, 534	......	......	......	......	......	......	......	......
5	Central American States	2, 724, 333	120, 489	......	......	......	......	......	......	......	......
6	Chili	......	......	......	......	......	......	......	......	......	......
7	China	14, 809, 588	497, 365	......	......	......	......	......	......	39, 655	2, 291
8	Denmark	......	......	......	......	......	......	......	......	......	......
9	Danish West Indies	5, 679, 119	231, 098	......	......	325, 397	$92, 779	......	......	......	......
10	Greenland, Iceland, and the Faroe Islands	......	......	......	......	......	......	......	......	......	......
11	France	26, 812	1, 086	7, 786	$550	......	......	......	......	10, 371	3, 456
12	French West Indies	74, 910, 338	2, 875, 801	......	......	46, 340	12, 569	......	......	......	......
13	French Guiana	378, 277	14, 097	......	......	......	......	......	......	......	......
14	Miquelon, Langley, and Saint Pierre Islands	......	......	......	......	......	......	......	......	......	......
15	French Possessions in Africa and adjacent islands	......	......	......	......	......	......	......	......	......	......
16	French Possessions, all other	......	......	......	......	......	......	......	......	......	......
17	Germany	16, 285, 489	758, 588	......	......	......	......	......	......	1, 385	485
18	England	9, 876, 111	357, 374	7, 131	621	......	......	......	......	46, 802	12, 186
19	Scotland	......	......	......	......	......	......	......	......	70	23
20	Ireland	......	......	......	......	......	......	......	......	......	......
21	Gibraltar	......	......	......	......	......	......	......	......	25	9
22	Nova Scotia, N. Brunswick, and Prince Edward Isl'd.	3, 440, 719	171, 243	......	......	52, 389	17, 806	......	......	3, 036	581
23	Quebec, Ontario, Manitoba, and the N. W. Territory	736	62	81	13	69	36	244	$18	996	146
24	British Columbia	666	25	216	16	......	......	......	......	88	6
25	Newfoundland and Labrador	......	......	......	......	......	......	......	......	......	......
26	British West Indies	132, 786, 551	4, 936, 290	......	......	1, 902, 948	520, 830	61, 252	1, 999	......	......
27	British Guiana	123, 331, 060	5, 893, 880	......	......	170, 688	35, 392	......	......	......	......
28	British Honduras	1, 720, 686	70, 887	......	......	......	......	......	......	......	......
29	British East Indies	1, 050, 388	36, 416	......	......	......	......	......	......	......	......
30	Hong Kong	3, 723, 532	111, 856	......	......	......	......	......	......	3, 957	216
31	British Possessions in Africa and adjacent islands	9, 475, 356	335, 930	500	35	......	......	......	......	......	......
32	British Possessions in Australasia	......	......	......	......	......	......	......	......	......	......
33	British Possessions, all other	......	......	......	......	......	......	......	......	......	......
34	Greece	......	......	......	......	......	......	......	......	......	......
35	Hawaiian Islands	......	......	......	......	......	......	......	......	......	......
36	Hayti	975, 394	42, 846	......	......	48, 501	12, 123	......	......	......	......
37	Italy	......	......	......	......	......	......	......	......	105	39
38	Japan	......	......	......	......	......	......	......	......	......	......

39	Liberia					1,083	341				
40	Mexico	1,792,171	63,419			3,953	1,101			29	7
41	Netherlands	389,444	16,635	22,046	1,434					196	83
42	Dutch West Indies	26,444	772			15,863	3,739				
43	Dutch Guiana	4,758,044	186,362			133,280	25,824				
44	Dutch East Indies	4,643,698	201,792								
45	Peru	1,600	90								
46	Portugal										
47	Azore, Madeira, and Cape Verde Islands									10	4
48	Portuguese Possessions in Africa and adjacent isl'ds										
49	Russia on the Baltic and White Seas										
50	Russia on the Black Sea										
51	Russia, Asiatic										
52	San Domingo	27,281,049	1,149,577			448,587	86,464	10,500	256		
53	Spain									112	40
54	Cuba	1,139,794,337	50,827,729	40	3	24,391,926	4,991,863	3,638,899	105,182	402	140
55	Porto Rico	83,940,670	3,559,343			5,448,321	1,841,406				
56	Spanish Possessions in Africa and adjacent islands	2,016,000	79,488								
57	Spanish Possessions, all other	188,589,026	6,008,179								
58	Sweden and Norway										
59	Turkey in Europe									175	58
60	Turkey in Asia										
61	Turkey in Africa										
62	United States of Colombia	365,911	14,947			158	63				
63	Uruguay										
64	Venezuela	227,865	8,107								
65	All other countries and ports in Africa, n. e. s							686	6		
	Total	2,019,785,814	84,176,771	37,800	2,672	32,989,503	7,642,111	3,711,581	107,461	107,045	19,854

APPENDIX No. 12.

Comparative tables showing by articles and by countries the exports from Mexico for the fiscal year 1882,–'83, *with those of the previous quinquennial years from July*, 1877, *to June*, 1882, *and with that of the preceding year* 1881–'82.

PRECIOUS METALS.

Articles.	Mean average of the quinquennial years from 1877 to 1882.	Fiscal year 1881–'82.	Fiscal year 1882–'83.
Silver:			
Coined	$15,212,466 81	$11,607,888 13	$22,969,583 90
Bullion	3,153,842 19	3,540,993 99	4,773,928 15
Ore	424,980 76	536,715 80	562,084 58
In sulphur	760 00	3,800 00	105,512 26
Silver-bearing earth	13,768 72	10,028 62	30,104 62
Manufactured	1,026 99	1,279 35	....
Lead, argentiferous	....	....	13,025 40
Gold:			
Coined	811,228 94	558,358 16	331,708 00
In bars	340,424 11	483,633 04	548,039 23
Silver, foreign, coined	322,202 99	121,642 29	146,615 59
Gold, foreign, coined	203,962 72	199,387 95	148,055 96
	20,484,664 23	17,063,767 33	29,628,657 69

OTHER ARTICLES.

Henequen (a species of hemp)	$1,849,650 88	$2,672,106 72	$3,311,062 64
Lumber	1,514,073 40	1,458,997 46	1,917,323 67
Coffee	2,022,986 32	2,414,538 20	1,717,190 85
Hides and skins	1,535,073 96	1,708,554 15	1,653,165 92
Istle	371,619 17	620,199 24	596,533 23
Animals, living	153,398 85	337,681 00	634,376 18
Vanilla	436,883 69	780,830 47	443,850 75
Tobacco	252,463 69	351,253 16	272,160 18
Sugar	320,055 49	266,075 60	198,365 16
Caoutchouc	67,677 06	114,455 92	159,882 72
Roots	24,053 86	40,737 32	123,438 01
Honey	73,488 67	60,911 60	115,817 56
Beans	63,993 96	62,536 20	90,641 11
Calicoes (Indian)	22,484 37	15,738 31	82,205 38
Fruits	36,303 03	43,523 19	78,898 42
Archil	113,267 61	115,617 68	74,628 68
Copper	39,983 20	44,533 50	65,996 00
Indian corn	26,225 67	61,121 69	63,684 11
Horse hair	33,994 73	41,832 39	62,007 77
Sarsaparilla	46,604 72	47,972 58	50,699 04
Lead	32,260 31	57,953 00	47,554 83
Mother of pearl	42,856 27	71,141 82	44,414 00
Medicinal plants	28,641 32	37,493 75	34,592 41
Sugar-crust	23,324 85	42,467 54	32,132 17
Chick-pea, a kind of pulse	12,253 46	4,511 10	28,855 44
Vegetables	4,086 85	5,992 12	19,596 60
Pearls	32,984 02	37,500 00	18,500 00
Spices	5,143 54	13,109 64	17,884 87
Cereals	82,739 64	22,146 00	2,868 00
Aniline	177,702 64	204,798 00	630 50
Cacao	1,390 70	2,150 00	503 00
Other articles	238,206 69	261,046 71	219,478 46
	9,685,872 62	12,019,526 06	12,178,937 66

RECAPITULATION.

Precious metals	$20,484,664 23	$17,063,767 33	$29,628,657 69
Other articles	9,685,872 62	12,019,526 06	12,178,937 66
	30,170,536 85	29,083,293 39	41,807,595 35

Comparative table showing the exports from Mexico for the fiscal year 1882–'83, *with those of the previous quinquennial years from July,* 1877, *to June,* 1882, *and with that of the preceding year,* 1881–'82, *by countries.*

PRECIOUS METALS.

Nations.	Mean average of the quinquennial years from 1877 to 1882.	Fiscal year 1881–'82.	Fiscal year 1882–'83.
England	$8, 754, 515 51	$8, 696, 379 07	$15, 201, 600 36
United States	7, 175, 670 73	5, 451, 731 13	9, 036, 773 33
France	3, 401, 592 72	1, 565, 482 71	3, 561, 987 13
Spain	435, 007 39	616, 436 99	1, 035, 013 00
Germany	313, 654 89	324, 107 46	392, 955 92
South America	404, 142 99	409, 229 97	400, 327 95
Italy	80 00	400 00	
	20, 484, 664 23	17, 063, 767 33	29, 628, 657 69

OTHER ARTICLES.

England	$1, 590, 395 47	$1, 587, 995 78	$2, 056, 642 25
United States	5, 995, 966 85	8, 309, 130 73	7, 702, 324 37
France	810, 434 98	621, 190 40	642, 918 42
Spain	446, 691 17	495, 048 67	954, 245 74
Germany	747, 842 31	932, 632 63	732, 763 29
South America	93, 036 84	67, 144 85	60, 703 59
Belgium			29, 040 00
Netherlands	786 60	3, 933 00	
Hayti	450 00	2, 250 00	
Italy	218 00	200 00	300 00
Switzerland	50 40		
	9, 685, 872 62	12, 019, 526 06	12, 178, 937 66

RECAPITULATION.

England	$10, 344, 910 98	$10, 284, 374 85	$17, 258, 242 61
United States	13, 171, 637 58	13, 760, 861 86	16, 739, 097 70
France	4, 212, 027 70	2, 186, 673 11	4, 204, 905 55
Spain	881, 698 56	1, 111, 485 66	1, 989, 258 74
Germany	1, 061, 497 20	1, 256, 740 09	1, 125, 719 21
South America	497, 179 83	476, 374 82	461, 031 54
Belgium			29, 040 00
Netherlands	786 60	3, 933 00	
Hayti	450 00	2, 250 00	
Italy	298 00	600 00	300 00
Switzerland	50 40		
	30, 170, 536 85	29, 083, 293 39	41, 807, 595 35

APPENDIX No. 13.

Exports of the precious metals and of merchandise from Mexico during the fiscal year ended July 31, 1883.

[From "The Mexican Financier," City of Mexico, October 27, 1883.]

The statement of the exports during the fiscal year ending July 31, 1883, makes a satisfactory showing. The total exportation was $41,807.595, against $29,083,293 in the previous year. Of this amount $29,628,657 was in precious metals, the increase of which was remarkable, being $12,844,191 over the previous year. The exportation of other articles amounted to $12,178,937, an increase of $159,411, which though small gives the lie to the damaging reports circulated by enemies of Mexico abroad to the effect that the exports of the country were declining.

Following is a statement of the principal articles exported:

Precious metals	$29,628,657 69
Henequen (a species of hemp)	3,311,062 64
Woods	1,917,323 67
Coffee	1,717,190 85
Skins	1,653,165 92
Living animals	634,376 18
Istle	596,533 23
Vanilla	443,850 75
Tobacco	272,160 18
Sugar	198,365 16
Caoutchouc	159,882 72
Roots of zacaton	123,438 01
Honey	115,817 56
Beans	90,641 11
Chitle (Indian calico)	82,205 38
Fruits	78,898 42
Orchilla	74,628 68
Copper	65,996 00
Maize	63,684 11
Horse-hair	62,007 77
Sarsaparilla	50,699 04
All other articles	467,010 28
Total	41,807,595 35

The principal increase has been in the following articles: Henequen, $638,955 woods, $458,326, and live stock, $296,695, and vanilla, $336,979. The decrease in the coffee export is due to the suicidal policy of the State of Vera Cruz in taxing the industry out of existence, a state of affairs which will probably be remedied by the new constitutional amendment.

With the opening of railway communication to the United States a large increase in the exportation of many of these articles may be looked for, for the modern railway policy is not to be content with taking what traffic may be offered, but to seek traffic and encourage it in every way. The average annual exportation for the five years from 1877 to 1882 was $20,484,664 in precious metals, and $9,685,872 in merchandise, making a decided increase for the exports of the past year. It is notable that the exports have increased alone to the United States and to England, while those to France, Spain, and Germany have remained stationary. The influence of the railways is shown by the increase of the exports through Monterey-Laredo, on the Mexican National, from $271,916 to $1,219,933; Paso del Norte, Mexican Central $80,994 to $881,019, and Nogales, Sonora Railway, from $5,768 to $143,211. These figures are eloquent, and are prophetic of a strong volume of exports by the new channels in a short time to come. The conference on the question of the abolition of interstate customs began its discussion of the committee's report last Thursday.

APPENDIX No. 14.

Production of precious metals in Mexico from the conquest by Cortez in 1521 *to beginning of* 1884.

[From advance sheets of "Mexico from the Material Standpoint," by Alex. D. Anderson.]

Periods.	Silver.	Gold.	Total.
1521 to 1804	$1,948,952,000	$79,000,000	$2,027,952,000
1804 to 1848	685,418,247	82,770,173	768,188,420
1848 to 1884	936,000,000	115,200,000	1,051,200,000
1521 to 1884	3,570,370,247	276,970,173	3,847,340,420

Percentage of silver	93
Percentage of gold	7

APPENDIX No. 15.

The world's production of silver.

[Prepared by the director of the United States Mint.]

Countries.	1877.	1878.	1879.	1880.	1881.	1882.	Total.
United States	$39,793,573	$45,281,385	$40,812,132	$39,200,000	$43,000,000	$46,800,000	$254,887,090
Russia	467,844	474,876	473,519	473,519	473,519	473,519	2,836,796
Australia	...	...	227,125	227,125	164,983	102,878	722,111
Mexico	27,018,940	27,018,940	25,167,763	25,167,763	27,675,540	29,237,798	161,286,744
Germany	6,135,877	5,227,219	5,570,380	7,730,617	7,771,304	8,934,652	41,370,049
Austria-Hungary	2,119,948	2,022,879	2,002,727	1,994,880	1,303,280	1,958,224	11,401,938
Sweden	54,038	52,708	62,435	54,527	48,875	48,875	321,458
Norway	...	...	...	...	...	...	...
Italy	17,949	17,949	17,949	17,949	17,949	17,949	107,694
Spain	...	...	...	...	...	...	...
Turkey	...	...	71,441	71,441	71,441	89,916	304,239
Argentine Republic	420,225	420,225	420,225	420,225	420,225	420,225	2,521,350
Colombia	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	6,000,000
Bolivia	1,039,190		11,000,000	11,000,000	11,000,000	11,000,000	75,758,678
Chili		10,392,500	5,081,747	5,081,747	5,081,747	5,081,747	
Brazil			...	...	...	...	
Japan	706,649	728,846	916,400	916,400	916,400	916,400	5,101,095
Africa	...	...	...	...	...	...	...
Venezuela	...	...	...	...	...	...	...
Dominion of Canada	...	...	68,205	68,205	68,205	68,205	272,820
Total	78,774,233	92,637,527	92,892,048	93,424,398	99,013,468	106,150,388	562,892,062

APPENDIX No. 16.

The world's productton of gold.

[Prepared by the director of the United States Mint.]

Countries.	1877.	1878.	1879.	1880.	1881.	1882.	Total.
United States	$46, 897, 390	$51, 206, 360	$38, 899, 858	$36, 000, 000	$34, 700, 000	$32, 500, 000	$240, 203, 608
Russia	27, 226, 668	27, 997, 889	28, 551, 028	28, 551, 028	28, 551, 028	28, 551, 028	169, 428, 669
Australia	29, 018, 223	29, 018, 223	28, 765, 000	28, 765, 000	30, 690, 000	28, 943, 217	175, 199, 663
Mexico	996, 898	999, 898	989, 160	989, 160	858, 909	936, 223	5, 770, 248
Germany	204, 697	208, 019	257, 865	232, 610	232, 610	249, 890	1, 385, 691
Austria-Hungary	1, 196, 278	1, 222, 230	1, 062, 031	1, 094, 596	1, 240, 808	1, 050, 068	6, 866, 011
Sweden	2, 658	6, 001	1, 994	3, 323	665	665	15, 306
Norway	....	....	....	....	....	....	....
Italy	2, 375	72, 375	72, 375	72, 375	72, 375	72, 375	434, 250
Spain	....	....	....	....	....	....	....
Turkey	....	....	4, 918	4, 918	4, 918	6, 646	21, 400
Argentine Republic	78, 546	78, 546	78, 546	78, 546	78, 546	78, 546	471, 276
Colombia	4, 000, 000	4, 000, 000	4, 000, 000	4, 000, 000	4, 000, 000	4, 000, 000	24, 000, 000
Bolivia	1, 993, 800		72 345	72, 345	72, 345	72, 345	6, 351, 612
Chili		172, 135	128, 869	128, 869	128, 869	128, 869	
Brazil			1, 003, 546	893, 887	741, 694	741, 694	
Japan	265, 840	295, 746	466, 548	466, 548	466, 548	466, 548	2, 427, 778
Africa	1, 993, 800	1, 993, 800	1, 993, 800	1, 993, 800	1, 993, 800	1, 993, 800	11, 962, 800
Venezuela	....	1, 821, 564	1, 615, 835	2, 274, 692	2, 274, 692	2, 274, 692	10, 261, 475
Dominion of Canada	....	....	815, 089	815, 089	1, 094, 926	1, 094, 926	3, 820, 030
Total	113, 947, 173	119, 092, 786	108, 778, 807	106, 426, 786	107, 202, 733	103, 161, 532	658, 619, 817

APPENDIX No. 17.

The world's production of gold and silver in 1876.

[From "Zur Statistik der Edelmetalle," by Dr. Adolf. Soetbeer.]

Countries.	Gold.	Silver.	Total.
Germany	$187, 000	$5, 809, 000	$5, 996, 000
Austria-Hungary	601, 000	1, 993, 000	2, 594, 000
Russia	22, 352, 000	465, 000	22, 817, 000
Europe—other countries	....	8, 935, 000	8, 935, 000
Africa	1, 329, 000	....	1, 329, 000
Mexico	1, 069, 000	26, 091, 000	27, 160, 000
Colombia	2, 658, 000	831, 000	3, 489, 000
Peru	1, 662, 000	14, 546, 000	16, 208, 000
Bolivia			
Chili			
Brazil	1, 196, 000	....	1, 196, 000
United States	39, 938, 000	38, 775, 000	78, 713, 000
Australia	39, 278, 000	....	39, 278, 000
Japan	199, 000	416, 000	615, 000
Other countries	2, 991, 000	416, 000	3, 407, 000
Total	113, 460, 000	98, 277, 000	211, 737, 000

APPENDIX No. 18.

VALUE OF EXPORTS FROM MEXICO, BY PORTS.

Report of Mr. José M. Garmendia for the fiscal year 1882–'83.

[From "The Republican Monitor" of December 14, 1883. Published by the Treasury Department of Mexico.]

Ports.	The precious metals.	Other commodities.	Total exports
Vera Cruz	$20, 242, 624 00	$3, 713, 692 20	$23, 956, 316 20
Mazatlan	4, 520, 774 21	119, 121 86	4, 639, 896 07
Progreso	223, 919 09	3, 517, 106 78	3, 741, 025 87
Tampico	478, 297 63	797, 157 69	1, 275, 455 32
Monterey Laredo	744, 538 14	475, 395 06	1, 219, 933 20
Paso del Norte	816, 781 18	64, 238 00	881, 019 18
La Paz	558, 887 78	137, 041 51	695, 929 29
Isla del Carmen (Carmen Island)	32, 641 00	580, 516 17	613, 157 17
Matamoros	271, 590 58	313, 526 57	585, 117 15
Tuxpan	2, 000 00	538, 376 49	540, 376 49
Manzanillo	421, 297 00	34, 097 00	455, 394 00
San Blas	379, 190 76	60, 426 25	439, 617 01
Frontera	33, 779 37	401, 467 98	435, 247 35
Guaymas	345, 738 74	29, 732 55	375, 471 29
Acapulco	135, 452 75	130, 165 47	265, 618 22
Coatzacoalcos		198, 795 20	198, 795 20
Mier	67, 087 25	127, 818 80	194, 906 05
Campeche	31, 482 00	141, 050 86	172, 532 86
Altata	29, 662 07	141, 039 15	170, 701 22
Nogales	95, 105 18	48, 106 77	143, 211 95
Piedras Negras	1, 900 00	107, 359 05	109, 259 05
Salina Cruz	19, 400 00	82, 305 90	101, 705 90
Zapaluta	92, 625 00		92, 625 00
Sasaba	35, 947 12	47, 739 87	83, 686 99
Camargo	29, 426 44	49, 132 00	78, 558 44
Guerrero	150 00	66, 724 28	66, 874 28
Bahia de la Magdalena		59, 916 85	59, 916 85
Touala	16, 860 40	33, 762 65	50, 623 05
Ascencion		42, 092 00	42, 092 00
Tocomsco	1, 500 00	38, 122 72	39, 622 72
Todos Santos		23, 784 05	23, 784 05
Reynosa		19, 048 00	19, 048 00
Puerto Angel		18, 038 28	18, 038 28
Tijuana		13, 576 00	13, 576 00
Cabo de San Lucas		3, 873 65	3, 873 65
Quitouaquita		2, 320 00	2, 320 00
Presidio del Norte		2, 270 00	2, 270 00
Total	29, 628, 657 69	12, 178, 937 66	41, 807, 595 35

APPENDIX No. 19.

Table exhibiting the value of the exports of the precious metals and of other commodities from Mexico to the several foreign countries during the fiscal year ended June 30, 1883.

Countries.	The precious metals.	Other commodities.	Total.
England	$15, 201, 600 36	$2, 056, 642 25	$17, 258, 242 61
United States of America	9, 036, 773 33	7, 702, 324 37	16, 739, 097 70
France	3, 561, 987 13	642, 918 42	4, 204, 905 55
Spain	1, 035, 013 00	954, 245 74	1, 989, 258 74
Germany	392, 955 92	732, 763 29	1, 125, 719 21
United States of Colombia	298, 937 55	59, 229 59	358, 167 14
Guatemala	92, 875 00	686 00	93, 561 00
Belgium		29, 040 00	29, 040 00
San Salvador	8, 515 40	288 00	8, 803 40
Italy		300 00	300 00
Venzuela		300 00	300 00
Ecuador		200 00	200 00
	29, 628, 657 69	12, 178, 937 66	41, 807, 595 35

APPENDIX NO. 20.

Statement in regard to the coal fields of Mexico by Mr. Alexander D. Anderson.

WASHINGTON, D. C., *January* 12, 1884.

DEAR SIR: In reply to your inquiry about coal deposits of Mexico, I submit the following general notes:

In Northern Mexico and surrounding the points on the Rio Grande River, where four American railways enter that Republic, are extensive coal fields, known as the Santa Rosa district. They cover several hundred miles of territory, and intersect the States of Coahuila, Tamaulipas, and Nuevo Leon, being chiefly in the first-mentioned State.

In an address before the American Institute of Mining Engineers, in 1882, W. H. Adams, a mining engineer who had visited the Santa Rosa district, thus describes the coal deposits:

"Fortunately for metallurgists who will hereafter make this frontier a base of operations, there has been disclosed, near to the surface, seemingly inexhaustible beds of semi-anthracite and bituminous coals.

"No extensive openings have as yet been made, and my own workings at the Cedral mines are all that can yet be said to prove the quantity and quality of the coal, other openings furnishing corroborative evidence. Our location (one hundred and ten miles west of the Rio Grande River) is on the western line of the depository basin, as existing since the period of activity along the volcanic line. Farther inland I have not examined, but much greater elevations are the rule, which, however, from the nature of their formation, are not necessarily barren ground.

"Beginning at the base of the Santa Rosa Mountains (location of the Cedral mines) we find very interesting breaks in the foot-hills, disclosing the stratified rocks from the volcanic centers to the valleys. * * *

"From their nearness to the coal measures, the mountains, which are protruded into the plains at this particular point, offer a great novelty in producing vertical veins of coal nearly anthracitic in character, which I have opened to a depth of 240 feet. Coal of a more bituminous nature is found outcropping on the rivers 30, 40, 60 miles to the eastward, and lignites in many places over a wide extent of country drained by the Rio Grande. The inference is that the heat which changed the metamorphic rocks drove off the bitumen, and that the nearer one approaches the mountain line the better is the product.

* * * * * * *

"To the eastward, breaks in the horizontal strata disclose sandstone, shales, fuller's earth, grit-stones, &c., while surface openings at several points along the Sabinas River, above ordinary water level, show veins of coal of good workable thickness and excellent quality. The amount of sulphur contained in the coal is considerable, and finely disseminated, but not so great as to require a washing operation.

"Passing farther to the east, openings have been made about Eagle Pass in a circuit of 20 miles in Mexico, and notably at the mouth of Seco Creek. Surface indications are, however, observable over the plains at numberless points between mountain chain and river. At Eagle Pass the Permian system undoubtedly commences, the gray and green-white sandstone showing itself in the bed of the river, and at several places along the Rio Grande River the opportunities for observation are equally perfect. Here the character of the coal changes, and lower grades of bituminous coal and shales are found in wide veins, but so mixed with clay and grit as to be of little value commercially, so far as yet developed. I cannot believe these beds to be brown coal or lignites, as generally stated, the geological formation being certainly too old for lignite; and although we have examples of good coal in the Tertiary, I know of no evidence of the presence of lignites in the Permian.

"Down the river more recent formations outcrop, and in the neighborhood of San Antonio the true brown coals of woody texture are found. Without a knowledge of the lines of upheaval, which are generally easily traceable, the casual observer would not note that Eagle Pass is, say, 500 feet higher than San Antonio, with all the strata inclining toward the latter, showing the coals of Eagle Pass to belong to an older period.

"The future commercial value of this basin of coal (which underlies one of the richest agricultural districts of Northern Mexico, and adjoins a mineral chain of known large extent and exceptionable richness) is yet to be determined. At present my own work is upon the upheaval veins, and being preparatory only, differs in no way from perpendicular vein work of any character. The coal cokes easily, producing about 60 per cent. in weight of good coke, and while I am not now prepared to give details of analyses, yet the extended underground workings and the new bank of fifty ovens to be erected this spring will furnish, I trust, a practical demonstration, which I shall be pleased to show to travelers."

In the State of Sonora and within convenient distance of the points where two other American railways enter Mexico—the Mexican Central and Sonora roads—are extensive and valuable deposits of coal, thus described by "The Two Republics", of the City of Mexico, under date of June 26, 1881:

"Great fields of anthracite coal have lately been opened in Sonora. They are said to rival the anthracite coals of Pennsylvania in quality, and to extend in one section of Sonora over a surface 20 miles in length and 2 miles in width. Only two of the veins have been worked so far, and they show a width of 10 and 7 feet, respectively, all of the purest anthracite, the upper one forming the slope of a hill, being covered only with a few feet of earth, and underlaid 12 feet distant by the second bed of equal quality. They are developed by drifts in the coal, which place at least one million tons in sight. The importance of these coal beds cannot be overestimated."

A little south of the cities of Mexico and Puebla, and therefore near the railway and manufacturing centers of that Republic, are extensive coal deposits, covering portions of the States of Puebla and Oaxaca. Eighteen mines have been discovered and examined in this district. These deposits are thus described by General José Revuelta of the city of Mexico:

"The extent of territory over which these coal deposits are found covers an area of some 60 square leagues. From various places in this tract of land I had extracted over 300 tons of coal, about 200 of which were taken to the City of Mexico and nearly as much to the city of Puebla, with a view of testing its qualities in the different founderies and furnaces of those cities, and in the locomotives plying between them, receiving reports from all sources that tried faithfully the coal from the above region, pronouncing it a good combustible, stating that it contained little or no sulphur. I found three kinds of coal—soft coal—others of a medium hardness and some dry and very hard. All these classes of coal I have had tested on a large scale, with favorable results."

Near the Isthmus of Tehuantepec, and therefore very desirably located, is another extensive coal field. An analysis of this coal gives the following results:

	Per cent.
Volatile and combustible matter	35
Fixed carbon	45
Moisture	8
Ashes (ferruginous)	12
	100

This is an analysis of the superficial layers and it is believed the deeper layers will give still better results.

In the Zacualtipan district in the State of Hidalgo, says the "Mexican Financier" of August 25, 1883, coal has been discovered in twenty-five points. It has also been discovered in the States of Vera Cruz, Morelos, Michoacan, Tlaxcala, and other parts of the Republic. Doubtless the new demand for this fuel, arising from the construction of railways and the development of manufactures will soon result in the discovery of many more deposits.

Respectfully yours,

ALEX. D. ANDERSON.

Hon JOSEPH NIMMO,
Chief of the Bureau of Statistics.

APPENDIX NO. 21.

Abstract of railroad charters granted by the Federal Government of Mexico since 1866, *and in force January* 1, 1883.

Date.	Designation, termini, and route.	Gauge.	Approximate length.	Amount of subsidy.	
				Per English mile.	Total.
			English miles.		
1881. Nov. 27	Very Cruz to City of Mexico, with branch to Puebla, States of Vera Cruz, Mexico, and Puebla	Standard	263	*$560,000	$14,000,000
1874. April 10	Progreso to city of Merida, State of Yucatan	Standard	28	9,660	270,000
Dec. 14	Tehuantepec Railroad, Isthmus of Tehuantepec, State of Oaxaca. (This charter was declared forfeited, and construction of road undertaken by the Mexican Government on its own account. Contract entered into for same with Señor D. Sanchez on October 5, 1882.)	Standard	192	....	....
1875. May 4	Vera Cruz to Zamorana, State of Vera Cruz	Standard	24	8,050	140,000
1878. Feb. 14	Navigable point on river Panuco, above Tampico to San Luis Potosi, through the States of Tamaulipas, and San Luis Potosi	Narrow	198	12,880	2,560,000
Mar. 26	Vera Cruz to Alvarado, and from river San Juan to Isthmus of Tehuantepec, in State of Vera Cruz	Not fixed	118	12,880	1,520,000
28	Merida to Tekax and Peto, State of Yucatan	Narrow	93	12,880	1,200,000
April 16	Mexico to Morelos and river Amacusac, with branch to Cuenavaca, States of Mexico and Morelos	Narrow	130	12,880	1,680,000
May 6	Puebla to Izucar de Matamoros, State of Puebla	Narrow	37	12,880	480,000
1880. Aug. 16	Culiacan and Altata to connect with Central Railroad from Durango, through States of Sinaloa and Durango	Narrow	99	12,880	1,280,00
Sept. 6	Jalapa to San Andrés Chalchicomula, States of Vera Cruz and Puebla	Standard	18	12,880	240,000
8	Mexican Central Railroad Company's charter, City of Mexico to El Paso, with to Pacific, through the States of Mexico, Hidalgo, Queretaro, Guanajuato, Jalisco, Aguascalientes, Zacatecas, Durango, Sinaloa, and Chihuahua. Distance on which to receive subsidy is fixed	Standard	1,776	15,295	27,075,000
13 1880.	Palmer and Sullivan Grant or Mexican National Construction Company, City of Mexico to Laredo and to Manzanillo, through the States of Mexico, Michoacan, Guanajuato, San Luis Potosi, and Nuevo Leon. Line, from City of Mexico to Pacific	Narrow	540	12,075	6,525,000
	Line from junction to Laredo	....	698	10,465	7,312,500
Sept. 14	City of Pueblo to San Marcos	Narrow	57	12,880	480,000
14	Sonora Railroad, Guaymas to frontier, with branch to Alamos in State of Sonora	Standard	514	12,075	6,225,000
14	Merida to Calkini and Celestino, State of Yucatan	Narrow	102	12,880	1,320,000
Nov. 27	Connection between Vera Cruz and Morelos Railroad, State of Mexico	Narrow	26	12,880	336,000
Dec. 15	From coal deposits on Yaqui River to Guaymas	Standard	122	....	No subsidy.
15	Merida and Valladolid Railroad, passing through Ixtakok, Motul and Izamal, State of Yucatan	Narrow	106	9,660	1,023,960
1881. Jan. 10	Extension of San Andres Chalchicomula to Jalapa Railroad to port of Vera Cruz, States of Puebla and Vera Cruz	Narrow	144	12,880	2,854,720

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* Per annum for twenty years.

Abstract of railroad charters granted by the Federal Government of Mexico, &c.—Cont'd.

Date.		Designation, termini, and route.	Gauge.	Approximate length.	Amount of subsidy.	
					Per English mile.	Total.
1881.				*English miles.*		
Jan.	19	Extension of line from El Alto Maeravatio, passing Tepeje and Jilotepec, States of Mexico and Michoacan	Standard	146	*$200,000	....
Feb.	2	Capital San Luis Potosi to most convenient point on Mexican Railroad, near city of Aguascalientes, States of San Luis Potosi and Aguascalientes	Standard	100	14,295	$1,429,500
	3	Campaña Station, on the Morelos Railroad to town of Tlalmanalco	Narrow	7	9,660	86,940
	23	City of Campeche to town of Calkini, and extension to Lerma, State of Campeche	Narrow	47	9,660	447,020
Apr.	26	Tehuantepec Ship-railroad, charter granted to Capt. J. B. Eads	Optional	166	....	No subsidy.
May	26	Mexican Southern Railroad Company, from Mexico City to frontier of Guatemala, passing through city of Puebla, touching at city of Oaxaca and at ports of Vera Cruz and Anton Lizardo, on Gulf of Mexico, and at those of the States of Chiapas and Oaxaca, on the Pacific, with various branches southward and westward. Afterwards charter extends this line to the northern frontier	Standard	1,920	....	No subsidy.
June	7	International Railway Improvement Company, from a point on the Rio Grande between Laredo and Reynosa, southward, passing through San Fernando, Santander Jimenez, &c., to City of Mexico, with branches to Pacific and to Vera Cruz, as also to other gulf ports	Standard	1,542	12,880	19,860,960
	7	International Construction Company, from a point on the Rio Grande 25 leagues above or below Piedras Negras to City of Mexico, and from some convenient point on the main line to a point on the Gulf of Mexico between the ports of Matamoros and Vera Cruz; and a line to the Pacific at a most convenient point between Mazatlan and Zihuatanejo	Standard	1,500	No subsidy.	....
	13	Texas, Topolobampo, and Pacific Railroad, from Topolobampo to Piedras Negras, States of Sonora and Coahuila, lines from most convenient points on the above to Alamos, State of Sonora, to Mazatlan, State of Sinaloa, and to Presido del Norte State of Chihuahua	Standard	1,517	†8,050	9,660,000
	22	Mexican Pacific Railroad, along the Mexican Pacific coast, from a point on the boundary line opposite Fort Yuma, southward to connect with International Improvement and Southern Railroad Company's lines and Mexican ports on the Pacific	Standard	1,500	No subsidy.	....
	25	Nantla and San Marcos Railroad, from bar of Nantla on the Gulf coast, between Vera Cruz and Tuxpan, to San Marco station on Mexican Railroad, States of Vera Cruz and Puebla	Standard	111	9,660	1,072,260
	27	San Andrés Cholchicomula and Vera Cruz Railroad extension, from Perote or San Andrés to point on Morelos Railroad, and branch from Perote to Tezintlan	Narrow	165	9,660	1,593,900
July	6	Mexican Central Railroad extension, line from Tantoyuquita to port of Tampico, States of San Luis Potosi to Tamaulipas	Standard	75	15,295	1,147,125
	12	The Sierra Madre and Tierre Coliente Inter Oceanic Railroad, from point between Nantla and Tampico, on Gulf coast, passing through City of Mexico to the Pacific, between Chacahua and Maruata, with branches to Cuernauaca	Standard	496	No subsidy.	....
	20	Alamos to Yavaros Sonora Railroad from city of Alamos to port of Yavaros, or some other port selected by Federal Executive	Standard	56	$9,660	$540,960

* Per annum.

† Except on Presito del Norte branch.

Abstract of railroad charters granted by the Federal Government of Mexico, &c.—Cont'd.

Date.	Designation, termini, and route.	Gauge.	Approximate length.	Amount of subsidy.	
				Per English mile.	Total.
1881.			*English miles.*		
July 21	Sinaloa and Durango Railroad, from port of Mazatlan on the Pacific, to city of Durango, and may be extended to Villa de Lerdo and Saltillo	Standard	445	$11,270	$5,015,150
Aug. 3	Puebla and Ilaxiaco Railroad, from Puebla to Ilaxiaco, passing through coal regions, and touching at towns of Amatlan and Acatlan, and connect with Morelos Railroad	Narrow	149	9,660	1,439,340
8	Tabasco Railroad Company, from San Juan Bautista to Minatitlan or Coatzacoalcos, with branches to Teapa and Tichualco, and to connect in State of Chiapas with Mexican Southern Railroad	Standard	180	*8,050 †9,660	1,497,300
26	Huasteca Railroad Company, from City of Mexico, passing between Pachuca and Tulancingo, through Carpinteros, Otlamacatlan and Huejutla, to reach junction of rivers at Cantojon; branch from Huejutla to Tuxpan Zacualtipam	Standard	501	No subsidy.	....
Sept. 17	Pichucalco and Cosahuyapa Railroad, from town of Pichucalco to Cosahuyapa Pass, State of Chiapas	Narrow	136	8,855	1,204,280
20	San Andre's Chalchicomula Railroad, from station of Dolores on Mexican Railroad, to city of above name, State of Puebla	Narrow	3	5,635	16,905
Dec. 12	Lower California and Sonora Railroad, from Tijuawa, on the frontier of the United States, passing through Punta Ysabel, to connect with Sonora Railroad; branches to connect towns of Altar and Madalena, State of Sonora	Standard	246	No subsidy.	....
23	Peralvillo and Reyes Railroad, from city-gate of Peralvillo, in the capital, to Peñon Baths, and connect at Los Reyes with Irio Railroad	Narrow	13	9,660	125,580
26	Puebla and San Marcos Railroad from Puebla to San Marcos, through San Juan de los Llamos; branch to Teapa, State of Puebla	Narrow	52	5,635	293,020
1832.					
Jan. 7	International Tamaulipas Railroad, from San Fernando, Tamaulipas, southward to port of Tampico	Standard	136	12,880	1,750,680
21	Road from Irolo, passing through Puebla, Chietla, or Izucar Matamoros, to connect with Morelos Railroad	Narrow	151	9,660	1,458,660
June 28	Central Plateau Mexican Railroad from City of Mexico, passing through Cuernavaca; Puente de Yitla, &c., to Zihuatenejo, on the Pacific, with branches to Ixtapa del Oro and chief towns of Michoacan to Morelia	Standard	559	No subsidy.	....
Sept. 30	Huatusco and Camaron Railroad Company, from Camaron Station, on Vera Cruz Railroad, to city of Huatusco	Standard	19	8,855	168,245
	Grand total	....	17,194	....	126,131,005

*On main line. †On branch.

R. B. GORSUCH, *Engineer.*

CITY OF MEXICO,
February, 1883.

APPENDIX No. 22.

Extract from a letter in regard to the commerce of Mexico—its population, geographical features, and transportation facilities, addressed to George S. Bowen, esq., of Chicago, by Joseph Nimmo, jr., September 2, 1878.

Our commercial relations with Mexico, like those with Canada, are intimately connected with our internal trade, from the fact of territorial contiguity.

The distinguishing topographical feature of Mexico will always control the direction of its foreign commerce. Along the sea coast is a narrow strip of low, hot, and unhealthy land, and in the interior an area of broad, extensive table-lands elevated from one to six thousand feet above the level of the sea, and embracing about seven-eighths of the territory of the country. The population of Mexico is therefore chiefly located upon the high lands.

Taking the figures of the sheet which you inclose, entitled "Our trade with Mexico," the population of the principal cities of the country is as follows: Chihuahua, 15,400; Coluna, 35,000; Durango, 24,000; Guanajuato, 53,000; Guadalajara, 70,000; San Luis Potosi, 45,000; Merida, 45,000; Morelia, 28,000; Monterey, 15,000; Ojaca, 28,000; Puebla, 100,000; Queretera, 30,000; Mexico, 250,000; Orizaba, 20,000.

All these cities are in the interior, and, with the exception of Mexico and Puebla, are practically cut off from foreign commerce. Even those two cities attained their present population before they enjoyed the facilities of railroad transportation. Reflect for a moment upon this remarkable anomaly, of a country having a population of 10,000,000, with all its large cities in the interior and practically cut off from foreign commerce. These cities have grown up mainly from internal industries and internal trade.

The city of Vera Cruz, the principal seaport on the Gulf, and to which we attach the most importance, is set down as having a population of only 9,000.

The foreign commerce of the populous interior district is quite insignificant, from the fact that, with the exception of the single line of railroad from Vera Cruz to the City of Mexico, the only means of transportation are horses, mules, and asses, and the Indian peons.

It appears to me to be perfectly clear, therefore, that the only way in which any considerable commerce can be built up between the United States and Mexico is by the extension of our railroad system from the Rio Grande to the City of Mexico.

About the beginning of this century, long before the day of railroads, Humboldt pointed out, as the most practical route for commercial intercourse between Mexico and the United States, the high plateau extending from the City of Mexico to the northern border. This plateau descends gradually toward the Rio Grande.

Now the American railroad system is fast reaching down toward the Mexican border. San Antonio, the center of interior Mexican trade, is already connected with the railroad system of this country.

The possibilities of trade with Mexico by rail may be illustrated by a single comparison. West of the States of Minnesota, Iowa, Missouri, Arkansas, and Louisiana, there have already been constructed 11,585 miles of railroad. In 1870 the entire population of this section of the country amounted to only 2,500,000, but Mexico has already a population of 10,000,000, with no railroads in connection with our lines.

As you know, the maritime trade of Mexico is largely with other countries. Her productions are, however, almost all of the character which would at once lead to a commerce with our Southern, Southwestern, and Northwestern States. A railroad from the Rio Grande to the City of Mexico would secure the principal trade of that country to the United States.

There is to-day a market in the Western, Northwestern, and Southern and Southwestern States for the entire surplus products of Mexico, and with proper rail transportation there would probably spring up a reciprocal trade in the manufactured products of this country, and to a considerable extent also in agritultural products.

APPENDIX No. 23.

Extract from the Mexican Financier of October 27, 1883, in regard to increased commerce and increased revenues of Mexico consequent upon the construction of railroads from the United States into that country.

CITY OF MEXICO, *October* 27, 1883.

With the opening of railway communication to the United States a large increase in the exportation of many of these articles may be looked for, for the modern railway policy is not to be content with taking what traffic may be offered, but to seek traffic and encourage it in every way. The average annual exportation for the five years from 1877 to 1882 was $20,484,664 in precious metals and $9,685,872 in merchandise, making a decided increase for the exports of the past year. It is notable that the exports have increased alone to the United States and to England, while those to France, Spain, and Germany have remained stationary. The influence of the railways is shown by the increase of the exports through Monterey—Laredo, on the Mexican National, from $271,916 to $1,219,933; Paso del Norte, Mexican Central, $80,994 to $881,019; and Nagales, Sonora Railway, from $5,768 to $143,211. These figures are eloquent, and are prophetic of a strong volume of exports by the new channels in a short time to come. The conference on the question of the abolition of interstate customs began its discussion of the committee's report last Thursday.

APPENDIX No. 24.

Railway distance and time from New Orleans, Saint Louis, Chicago, and Washington, to City of Mexico, allowing 25 miles per hour for passenger trains and 13 miles per hour for freight trains, including stops.

From—	To—	Distance.	Passenger.		Freight.		Remarks.
			Train.	Time.	Train.	Time.	
		Miles.	*Days.*	*Hours.*	*Days.*	*Hours.*	
New Orleans	City of Mexico	1,551	2	14	4	23	Via Laredo and Mexican National Railway.
New Orleans	....do	2,423	4	1	7	18	Via El Paso and Mexican Central Railway.
Saint Louis	....do	1,903	3	4	6	2	Via Laredo and Mexican National Railway.
Saint Louis	....do	2,573	4	6	8	6	Via El Paso and Mexican Central Railway.
Chicago	....do	2,255	3	18	7	5	Via Laredo and Mexican National Rail way.
Chicago	....do	2,874	4	19	9	5	Via El Paso and Mexican Central Railway.
Washington	....do	2,738	4	13	8	18	Via Laredo and Mexican National Rail way.
Washington	....do	3,408	5	16	10	22	Via El Paso and Mexican Central Railway.
San Francisco	....do	2,499	4	4	8	0	Via El Paso and Mexican Central Railway.

APPENDIX NO. 25.

Statement showing the quantities and values of the principal and all other articles of imports into the United States from, and of exports from the United States to, Mexico, 1858–1883.

IMPORTS OF MERCHANDISE FROM MEXICO.

Year ended June 30—	Breadstuffs and other farinaceous food.*		Coffee.		Copper, pigs, bars, ingots, old, and other unmanufactured.		Chemicals, drugs, dyes, and medicines.			Hides and skins other than furs.	Hair unmanufactured	India rubber and gutta-percha, crude, or unmanufactured.		Jute, and other grasses, raw.		Lead, pigs, bars, and old.	
	Indian corn.	All other.					Cochineal and indigo.	Dye woods, in sticks.	All other.†								
			Pounds.		*Pounds.*							*Pounds.*		*Tons.*		*Pounds.*	
1858	$34,686	$28,198	29,687	$3,259	....	$1,437	‡$31,793	$107,649	$1,030	$496,929	$11,261	....	$143	406	$50,173	36,517	$825
1859	45,520	15,794	45,518	6,036	....	3,638	144,437	46,208	1,336	457,297	485	....	....	389	44,861	91,440	1,829
1860	28,940	5,124	549,265	64,616	....	10,542	49,651	161,115	110	535,591	2,074	....	107	251	25,114	320,141	6,203
1861	19,612	8,445	461,416	59,405	....	1,320	91,645	115,757	411	267,527	2,264	....	....	382	35,670	57,482	1,150
1862	....	6,399	7,175	1,026	12,958	1,734	49,564	91,976	....	171,905	11,535	1,586	252	286	23,537	....	....
1863	....	15,048	935,594	122,663	85,796	14,081	91,151	48,094	10,830	383,530	912	....	....	898	44,647	295,136	13,988
1864	....	9,818	11,736	2,927	129,810	21,401	123,434	110,299	12,622	563,978	2,140	....	201	843	63,455	4,699	297
1865	....	6,337	505	109	114,761	16,528	132,959	136,341	7,127	547,109	1,667	....	20	333	36,496	648	60
1866	....	....	524,777	84,478	40,299	5,629	96,362	69,350	40,722	325,186	3,196	....	214	889	104,453	25,152	1,509
1867	9,975	5,183	138,005	18,468	20,497	3,001	130,154	108,754	39,024	368,817	2,808	....	228	862	116,455	....	....
1868	34,269	29,599	882,521	112,159	29,536	3,123	144,144	187,337	38,526	411,505	2,613	2,554	600	1,513	237,803	79,504	2,799
1869	71,163	53,140	203,048	22,062	57,700	7,326	144,974	207,859	64,510	745,550	2,728	34,842	8,648	2,906	469,235	523,043	22,211
1870	79,321	48,551	110,607	13,223	24,197	2,304	‡92,836	244,932	28,380	833,743	4,697	98,656	23,594	3,300	631,090	456,516	14,607
1871	104,554	68,313	526,495	59,454	161,711	18,608	117,745	36,698	53,306	714,489	6,442	93,046	33,055	3,328	626,044	725,211	23,261
1872	74,297	43,114	1,878,301	248,022	2,468	218	104,772	39,660	286,781	1,380,082	15,940	106,417	34,792	4,244	784,809	461,274	14,653
1873	53,547	62,720	2,035,540	314,347	39,704	3,120	55,239	27,752	163,745	1,903,387	55,420	184,554	63,269	3,590	534,980	392,440	19,304
1874	61,081	37,720	2,930,285	624,611	14,028	2,161	61,964	65,662	70,090	1,561,830	18,625	72,963	23,710	4,867	694,254	817,579	41,978
1875	33,628	31,002	2,691,889	485,489	4,611	620	54,519	63,958	158,279	2,077,156	28,784	115,607	35,690	6,185	613,338	325,648	16,689
1876	45,990	49,022	3,941,229	713,833	23,050	2,490	39,736	150,413	247,427	1,812,567	79,230	39,835	11,103	6,846	542,756	837,698	42,[illegible]53
1877	25,791	39,411	6,789,693	1,265,970	67,793	7,917	52,726	72,402	219,193	1,529,702	29,317	43,314	13,8[illegible]5	7,278	656,746	1,336,641	68,218
1878	12,321	34,339	6,337,063	1,082,272	68,556	7,082	‡23,196	112,482	204,135	1,565,546	42,710	40,494	11,364	9,163	889,061	1,136,453	58,245
1879	33,497	56,432	8,307,040	1,371,979	18,443	3,302	62,483	96,877	159,017	1,675,777	34,274	17,500	4,432	10,197	930,396	407,276	20,839
1880	65,230	65,192	9,818,525	1,523,658	226	19	68,345	149,651	106,706	1,951,918	36,964	107,026	44,235	14,086	1,324,075	....	....
1881	87,840	43,141	13,911,910	1,730,838	55,740	6,825	20,973	160,070	263,642	2,111,750	39,701	616,742	315,059	17,153	1,634,215	630,947	27,661
1882	58,648	41,352	17,020,669	1,817,584	3,562	494	5,813	128,734	198,030	1,525,107	38,810	325,206	164,8[illegible]7	19,233	2,061,939	1,132,064	44,365
1883	22,072	50,192	8,578,532	809,757	124	8	....	211,714	119,681	1,568,645	52,985	241,478	123,484	25,065	2,712,088	1,191,225	26,919

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* All other breadstuffs comprise barley, barley malt, bread and biscuit, oats, rice, rye, wheat, wheat flour, meal of all kinds, pease and beans; all other farinaceous food and preparations of.

† All other chemicals, drugs, dyes, and medicines include: Argols; medicinal barks; camphor, crude; madder; soda, nitrate of; gums; cutch and catechu; opium; soda and salts of; sulphur or brimstone; chloride of lime or bleaching powder; all chemicals, not elsewhere specified.

‡ Cochineal only; no indigo included.

MEXICO, 1858-1883—Continued.

IMPORTS OF MERCHANDISE FROM MEXICO.

Year ended June 30—	Animals, living.	Precious stones.	Salt.	Spices of all kinds.	Sugar and molasses of all kinds.	Wool, raw and fleece.		Wood, unmanufactured.	Other merchandise.	Total imports of merchandise.
						Pounds.				
1858	....	....	$6, 285	$1, 252	$9, 569	....	$4, 137	$43, 674	$275, 901	$1, 108, 501
1859	....	....	11, 321	1, 272	8, 273	....	9, 864	55, 949	389, 964	1, 244, 084
1860	....	....	22, 555	642	55, 309	....	15, 151	101, 392	819, 195	1, 903, 431
1861	....	....	12, 266	1, 835	23, 333	....	1, 641	102, 711	141, 120	886, 112
1862	....	....	16, 138	1, 551	10, 886	31, 209	3, 560	51, 415	*289, 510	817, 809
1863	....	....	40, 871	3, 959	45, 576	1, 226, 820	155, 450	69, 014	†1, 984, 068	3, 043, 882
1864	....	....	36, 247	22, 873	12, 019	702, 676	96, 503	62, 342	‡4, 987, 889	6, 128, 445
1865	....	....	6, 452	10, 836	816	....	45, 490	83, 921	§5, 188, 606	6, 220, 874
1866	....	....	12, 326	30, 920	79, 904	163, 297	18, 667	82, 908	‖770. 268	1, 726, 092
1867	....	....	13, 645	19, 041	1, 693	....	377	106, 921	127, 392	1, 071, 936
1868	....	....	21, 368	40, 324	29, 735	69, 493	4, 386	72, 973	217, 404	1, 590, 667
1869	....	....	13, 716	33, 841	65, 197	716, 068	51, 838	126, 345	225, 821	2, 336, 164
1870	....	....	30, 235	104, 476	28, 123	656, 459	49, 829	107, 808	377, 916	2, 715, 665
1871	....	....	29, 600	124, 403	39, 877	865, 909	68, 907	176, 724	908, 208	3, 209, 688
1872	$188, 558	$32, 449	20, 984	10, 396	52, 007	1, 182, 481	128, 375	279, 020	263, 991	4, 002, 920
1873	147, 512	330	6, 963	1, 613	11, 818	1, 182, 414	129, 475	171, 554	550, 070	4, 276. 165
1874	134, 701	102, 048	9, 844	2, 100	17, 682	1, 173, 099	112, 226	324, 520	379, 557	4, 346, 364
1875	81, 439	156, 690	8, 201	1, 882	104, 547	1, 095, 282	119, 534	346, 923	756, 226	5, 174, 594
1876	108, 050	63, 329	6, 803	1, 520	164, 567	838, 798	85, 887	247, 833	735, 763	5, 150, 572
1877	129, 897	6, 355	7, 196	5, 481	227, 543	1, 405, 983	119, 708	133, 690	533, 176	5, 204, 264
1878	132, 971	1, 540	6, 768	1, 650	155, 700	835, 487	72, 216	257, 853	580, 051	5, 251, 502
1879	132, 873	3, 927	6, 138	3, 760	76, 992	819, 784	66, 300	224, 925	529, 001	5, 493, 221
1880	175, 305	5, 416	8, 419	9, 040	232, 655	1, 321, 874	144, 875	408, 754	889, 136	7, 209, 593
1881	314, 272	21, 657	7, 178	5, 219	124, 535	1, 009, 376	99, 479	329, 295	974, 452	8, 317, 802
1882	455, 917	76, 241	802	8, 428	104, 374	191, 666	18, 037	499, 776	1, 212, 601	8, 461, 899
1883	661, 245	56, 176	973	10, 775	64, 527	1, 775	257	441, 083	1, 244, 542	8, 177 123

* Of this amount $60,497 was the value of unmanufactured cotton.
† Of this amount $1,750,615 was the value of unmanufactured cotton.
‡ Of this amount $4,859,725 was the value of unmanufactured cotton.
§ Of this amount $5,128,875 was the value of unmanufactured cotton.
‖ Of this amount $417,197 was the value of unmanufactured cotton.

MEXICO, 1858-1883—Continued.

EXPORTS OF DOMESTIC MERCHANDISE TO MEXICO.

Year ended June 30—	Sheep.		Bread and breadstuffs.				Cotton, raw or unmanufactured.	
			Indian corn.		Wheat and wheat-flour.	All other.*		
	No.		Bushels.				Pounds.	
1858	....	....	49, 579	$37, 676	$139, 673	$3, 629	9, 084, 609	$1, 074, 818
1859	....	....	48, 932	29, 886	184, 223	4, 137	5, 993, 635	883, 337
1860	....	....	80, 329	78, 063	247, 206	8, 247	9, 043, 377	1, 076, 150
1861	....	....	13, 877	9, 993	109, 033	10, 920	1, 410, 659	153, 905
1862	....	....	18, 364	14, 017	282, 810	31, 915	....	....
1863	....	....	268, 653	263, 849	777, 122	379, 727	....	....
1864	....	....	187, 014	256, 924	855, 772	50, 730	417, 497	331, 199
1865	280	$740	181, 462	347, 464	1, 089, 016	90, 238	....	....
1866	33	590	158, 624	121, 553	584, 012	66, 227	50, 317	17, 611
1867	543	2, 800	14, 218	16, 874	547, 965	117, 066	3, 310, 842	934, 458
1868	3, 156	2, 253	7, 292	9, 051	343, 205	10, 938	8, 228, 598	1, 349, 685
1869	(†)	(†)	72, 216	72, 439	278, 111	10, 923	2, 042, 224	458, 405
1870	27, 481	18, 189	62, 859	65, 292	209, 371	11, 911	6, 609, 707	1, 412, 863
1871	36, 347	32, 837	173, 585	169, 350	225, 718	14, 069	11, 309, 498	1, 586, 517
1872	27, 228	25, 843	21, 039	27, 233	218, 279	35, 166	957, 209	128, 186
1873	57, 217	59, 935	104, 146	99, 166	110, 525	22, 310	550, 639	74, 352
1874	111, 445	110, 290	55, 881	40, 049	96, 666	25, 449	2, 289, 561	322, 507
1875	112, 553	133, 222	9, 862	9, 092	102, 173	21, 532	1, 305, 276	184, 186
1876	95, 215	104, 865	93, 487	75, 945	108, 952	26, 580	6, 972, 575	890, 574
1877	161, 549	144, 908	64, 776	55, 658	88, 913	23, 756	3, 969, 812	462, 902
1878	153, 065	158, 217	288, 109	267, 623	171, 450	51, 885	3, 422, 162	357, 210
1879	89, 689	103, 789	126, 613	95, 802	129, 971	50, 001	9, 898, 129	912, 583
1880	115, 265	120, 817	85, 702	68, 743	69, 072	44, 126	9, 881, 543	1, 176, 067
1881	108, 886	118, 498	352, 510	240, 182	93, 757	60, 198	13, 386, 186	1, 494, 101
1882	81, 338	112, 421	419, 263	332, 642	103, 528	91, 475	12, 537, 650	1, 447, 522
1883	235, 585	364, 866	476, 453	391, 751	178, 408	118, 744	20, 577, 771	2, 217, 259

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* Bread and breadstuffs, all other, comprise barley, bread and biscuit, Indian-corn meal, oats, rye, rye-flour, other small grain and pulse, maizena, farina, and all other breadstuffs, or preparations of, used as food.

† Classed under the general heading "Animals living, all kinds," total $156,773.

Year ended June 30—	Cotton, manufactures of.					Drugs, chemicals, medicines, acids, ashes, and dye-stuffs.	Glass and glassware.	Iron and steel, and manufactures of.*	Leather, and manufactures of.	
	Colored.		Uncolored.		All other.				Boots and shoes.	All other.
	Yards.		*Yards.*							
1858	....	....	....	....	$281, 504	$29, 957	$8, 011	$188, 214	$1, 066	$4, 404
1859	....	....	....	....	312, 203	34, 280	7, 637	91, 472	9, 345	5, 873
1860	....	....	....	....	641, 870	63, 727	5, 981	329, 326	8, 929	4, 294
1861	....	....	....	....	312, 695	48, 710	5, 763	255, 327	4, 562	6, 395
1862	....	....	....	....	157, 874	75, 194	14, 486	265, 225	9, 676	4, 607
1863	....	....	....	....	1, 784, 531	118, 604	43, 224	704, 944	289, 543	112, 334
1864	....	....	....	....	717, 622	166, 741	40, 670	1, 165, 541	373, 146	67, 404
1865	....	....	....	....	2, 222, 410	326, 675	126, 447	1, 423, 571	1, 119, 848	160, 203
1866	....	....	3, 718	$1, 049	58, 663	89, 690	23, 515	420, 034	32, 131	35, 114
1867	141, 780	$29, 186	45, 383	9, 915	356, 163	68, 137	16, 813	770, 150	21, 533	21, 689
1868	397, 472	51, 828	407, 619	68, 023	387, 610	85, 635	27, 010	784, 897	61, 227	23, 874
1869	(†)	(†)	(†)	(†)	341, 593	73, 572	27, 076	811, 384	95, 590	18, 430
1870	1, 049, 621	149, 569	601, 927	76, 127	106, 373	113, 105	21, 217	654, 298	116, 761	11, 591
1871	758, 338	102, 254	1, 451, 727	162, 934	94, 366	96, 248	18, 905	698, 296	91, 070	16, 970
1872	559, 411	84, 387	1, 355, 636	156, 537	38, 368	93, 7 4	26, 419	803, 668	98, 565	18, 480
1873	500, 156	66, 185	1, 258, 921	155, 657	73, 244	107, 436	26, 752	1, 043, 071	104, 377	13, 613
1874	277, 032	35, 357	1, 086, 883	123, 009	50, 337	126, 437	20, 007	1, 073, 530	70, 417	12, 757
1875	569, 855	62, 724	1, 019, 997	104, 608	64, 189	112, 877	37, 561	954, 961	84, 129	26, 026
1876	1, 210, 286	111, 351	2, 143, 975	201, 513	60, 595	111, 348	20, 743	1, 062, 687	79, 153	11, 182
1877	6, 255, 489	513, 488	5, 876, 817	486, 159	64, 450	79, 799	24, 763	786, 365	53, 383	14, 233
1878	10, 104, 048	746, 301	5, 726, 156	468, 717	87, 278	123, 069	56, 898	1, 201, 574	60, 950	27, 719
1879	7, 663, 001	509, 255	3, 886, 748	286, 205	69, 852	127, 756	47, 831	996, 080	58, 500	21, 124
1880	6, 402, 170	501, 648	2, 808, 228	224, 181	106, 406	145, 331	54, 781	1, 257, 731	53, 466	25, 133
1881	6, 874, 372	512, 195	3, 657, 611	312, 824	193, 630	212, 477	87, 313	2, 582, 346	48, 207	45, 953
1882	6, 745, 817	504, 619	3, 838, 669	318, 517	296, 132	288, 824	111, 542	4, 239, 712	85, 327	65, 517
1883	6, 114, 541	441, 252	3, 523, 873	292, 009	185, 329	265, 220	159, 099	3, 772, 287	86, 788	65, 102

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* Including, also, printing presses and type, scales and balances, sewing-machines, and parts of, steam and other fire engines and apparatus.

† Included in "All other."

MEXICO, 1858-1883—Continued.

EXPORTS OF DOMESTIC MERCHANDISE TO MEXICO.

Year ended June 30—	Refined illuminating mineral oil.	Ordnance stores.			Provisions.*					Quicksilver.	Sugar and molasses.	Tobacco and manufactures of.	Wood and manufactures of.	Other merchandise.	Total exports of domestic merchandise.	Total exports of foreign merchandise.	Total exports of merchandise.
		Cartridges and fuses.	Gunpowder.	All other.	Bacon and hams.		Lard.		All other.*								
					Pounds.		*Pounds.*										
1853	....	....	$7, 015	....	49, 198	$6, 280	526, 208	$67, 902	$19, 382	$77, 490	$3, 047	15, 387	$62, 763	$754, 634	$2, 782, 852	$529, 973	$3, 312, 825
1859	....	....	14, 409	....	43, 431	5, 202	679, 033	65, 413	19, 319	....	7, 054	14, 163	61, 496	502, 713	2, 252, 162	667, 580	2, 919, 742
1860	....	....	66, 523	....	60, 551	7, 709	906, 106	103, 120	24, 305	103, 128	21, 259	9, 527	84, 372	425, 643	3, 309, 379	2, 015, 334	5, 324, 713
1861	....	....	25, 775	....	37, 502	4, 885	117, 487	17, 344	16, 712	197, 765	11, 391	9, 526	55, 465	302, 896	1, 559, 062	651, 364	2, 210, 426
1862	....	....	4, 906	....	69, 170	6, 453	656, 851	56, 692	31, 093	436, 231	5, 723	22, 700	78, 900	342, 218	1, 840, 720	340, 454	2, 181, 174
1863	....	....	6, 115	....	487, 992	49, 440	1, 357, 512	150, 279	110, 627	572, 436	13, 922	202, 234	326, 014	1, 536, 634	7, 441, 579	1, 579, 045	9, 020, 624
1864	$15, 901	....	6, 244	....	321, 760	40, 781	2, 825, 411	340, 683	191, 442	302, 222	53, 275	270, 972	544, 885	1, 972, 979	7, 765, 133	1, 505, 464	9, 270, 597
1865	26, 657	....	....	....	294, 721	59, 750	2, 334, 693	453, 797	295, 006	207, 090	36, 364	436, 420	872, 314	4, 525, 962	13, 819, 972	2, 530, 867	16, 350, 839
1866	97, 687	....	1, 750	....	120, 353	28, 264	889, 408	212, 256	134, 121	182, 120	34, 593	26, 663	211, 876	1, 322, 080	3, 701, 599	871, 619	4, 573, 218
1867	60, 887	$34, 317	16, 957	$32, 457	93, 418	18, 402	893, 794	137, 262	112, 476	379, 238	53, 699	32, 763	137, 319	895, 138	4, 823, 614	572, 182	5, 395, 796
1868	92, 909	10, 790	26, 573	26, 213	98, 490	16, 710	981, 178	134, 619	64, 739	335, 729	32, 847	27, 354	179, 130	895, 571	5, 048, 420	1, 392, 919	6, 441, 339
1869	64, 657	....	20, 968	....	68, 113	12, 658	630, 541	108, 798	40, 136	328, 117	44, 025	91, 301	141, 477	796, 039	3, 835, 699	1, 047, 408	4, 883, 107
1870	157, 034	32, 839	26, 220	6, 978	95, 852	17, 555	734, 683	124, 107	63, 028	225, 301	26, 254	87, 690	151, 231	659, 841	4, 544, 745	1, 314, 955	5, 859, 700
1871	90, 073	26, 756	24, 274	2, 838	210, 770	30, 010	764, 704	93, 708	60, 149	325, 980	13, 385	129, 567	144, 227	793, 532	5, 044, 033	2, 568, 080	7, 612, 113
1872	172, 280	55, 272	40, 800	271	296, 001	31, 686	1, 079, 754	121, 082	69, 848	177, 316	33, 268	71, 239	178, 636	714. 095	3, 420, 658	2, 122, 931	5, 543, 589
1873	143, 149	70, 139	46, 834	130	277, 536	33, 918	808, 445	83, 081	65, 749	263, 370	138, 572	140, 750	156, 058	842, 646	3, 941, 019	2, 323, 882	6, 264, 901
1874	164, 160	47, 608	23, 788	314	269, 862	28, 052	364, 646	36, 628	58, 118	405, 048	127, 613	91, 218	251, 951	674, 838	4, 016, 118	1, 930, 691	5, 946, 839
1875	108, 368	68, 432	28, 807	212	110, 799	14, 909	388, 420	52, 243	53, 456	471, 808	59, 328	100, 499	253, 249	763, 413	3, 872, 004	1, 865, 278	5, 737, 282
1876	171, 348	146, 390	25, 210	9, 746	128, 983	19, 338	311, 862	41, 762	61, 463	365, 097	38. 442	109, 546	226, 816	620, 332	4, 700, 978	1, 499, 594	6, 200, 572
1877	221, 894	57, 578	26, 672	302	64, 360	9, 091	550, 718	63, 491	54, 972	352, 606	58, 485	147, 347	161, 013	551, 574	4, 503, 802	1, 389, 692	5, 893, 494
1878	173, 438	118, 793	34, 867	....	141, 505	16, 565	1, 255, 063	137, 119	81, 543	290, 249	75, 704	122, 844	252, 055	729, 361	5, 811, 429	1, 649, 275	7, 460, 704
1879	152, 438	73, 914	43, 742	1, 141	75, 645	9, 378	1, 204, 422	102, 052	71, 820	344, 006	38, 800	160, 516	240, 289	753, 535	5, 400, 380	1, 351, 864	6, 752, 244
1880	155, 328	80, 113	49, 627	256	90, 496	11, 312	1, 508, 525	126, 319	77, 512	377, 825	41, 673	152, 791	274, 532	871, 184	6, 065, 974	1, 800, 519	7, 866, 493
1881	173, 155	95, 230	145, 397	....	169, 312	19, 765	1, 313, 086	132, 597	97, 534	462, 159	63, 750	135, 174	544, 201	1, 327, 434	9, 198, 077	1, 973, 161	11, 171, 238
1882	226, 115	98, 303	226, 125	....	214, 523	31, 013	1, 183, 647	145, 293	136, 198	316, 714	71, 582	142, 671	1, 426, 411	2, 506, 302	13, 324, 505	2, 158, 077	15, 482, 582
1883	249, 404	119, 491	303, 783	....	243, 583	37, 955	1, 392, 134	163, 797	142, 213	394, 572	73, 298	141, 185	1, 385, 420	2, 821, 760	14, 370, 992	2, 216, 628	16, 587, 620

*Provisions, all other, comprise: Beef, salted or cured; beef, fresh; butter, cheese, condensed milk; eggs; fish, dried, smoked, fresh, pickled, other cured; meats, preserved mutton, fresh; oysters; pickles and sauces; pork; onions; potatoes; other vegetables; vegetables, prepared or preserved.